

# ***Micro Hi-Fi Component System***

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Operating Instructions



SUPER AUDIO CD



V I D E O



**CMT-WS2D**

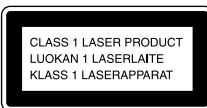
## **WARNING**

### **To prevent fire or shock hazard, do not expose the unit to rain or moisture.**

To prevent fire, do not cover the ventilation of the apparatus with news papers, table-cloths, curtains, etc. And don't place lighted candles on the apparatus.

To prevent fire or shock hazard, do not place objects filled with liquids, such as vases, on the apparatus.

Do not install the appliance in a confined space, such as a bookcase or built-in cabinet.



This appliance is classified as a CLASS 1 LASER product. This marking is located on the rear exterior.



Don't throw away the battery with general house waste, dispose of it correctly as chemical waste.

### **Except for European and Russian models**



ENERGY STAR® is a U.S. registered mark. As an ENERGY STAR® partner, Sony Corporation has determined that this product meets the ENERGY STAR® guidelines for energy efficiency.



### **Disposal of Old Electrical & Electronic Equipment (Applicable in the European Union and other European countries with separate collection systems)**

This symbol on the product or on its packaging indicates that this product shall not be treated as household waste. Instead it shall be handed over to the applicable collection point for the recycling of electrical and electronic equipment. By ensuring this product is disposed of correctly, you will help prevent potential negative consequences for the environment and human health, which could otherwise be caused by inappropriate waste handling of this product. The recycling of materials will help to conserve natural resources. For more detailed information about recycling of this product, please contact your local city office, your household waste disposal service or the shop where you purchased the product.

This system incorporates Dolby<sup>1)</sup> and DTS<sup>2)</sup> Digital Surround System.

<sup>1)</sup> Manufactured under license from Dolby Laboratories.

"Dolby" and the double-D symbol are trademarks of Dolby Laboratories.

<sup>2)</sup> Manufactured under license from Digital Theater Systems, Inc. "DTS" and "DTS 2.0 + Digital Out" are trademarks of Digital Theater Systems, Inc.

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## How to use this manual

- This manual mainly explains operations using the remote, but the same operations can also be performed using the buttons on the unit having the same or similar names.
- The OSD (on-screen display) may vary depending on the country model.
- The English OSD screen (on-screen display) is used for illustration purposes only.
- The Control Menu items may be different depending on the disc type (page 68).
- The selectable items in the Setup Display may be different depending on the area (page 32).
- “DVD” may be used as a general term for DVD VIDEOs, DVD+RWs/DVD+Rs and DVD-RWs/DVD-Rs.
- The following symbols are used in this manual.

Symbol	Meaning
DVD-V	Functions available for DVD VIDEOs, DVD-Rs/DVD-RWs in video mode, and DVD+Rs/DVD+RWs
DVD-RW	Functions available for DVD-RWs in VR (Video Recording) mode
VIDEO CD	Functions available for VIDEO CDs (including Super VCDs or CD-Rs/CD-RWs in video CD format or Super VCD format)
SA-CD CD	Functions available for music CDs or CD-Rs/CD-RWs in music CD format, or Super Audio CD
DATA CD	Functions available for DATA CDs (CD-ROMs/CD-Rs/CD-RWs containing MP3* audio tracks and JPEG image files)

\* MP3 (MPEG1 Audio Layer 3) is a standard format defined by ISO/MPEG which compresses audio data.

## Playable discs

You can play back the following discs on this system. Other discs cannot be played back.

### List of playable discs

Format of discs	Disc logo	
DVD VIDEOs		
DVD-RWs		
Super Audio CDs	 SUPER AUDIO CD	
VIDEO CDs		
Audio CDs		
CD-R/CD-RW (audio data/MP3 files/ JPEG files)	 COMPACT  DIGITAL AUDIO Recordable	 COMPACT  DIGITAL AUDIO Rewritable
		

The “DVD VIDEO” logo and “DVD-RW” logo are trademarks.

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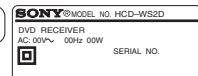
## **Region code of DVDs you can play on this system**

Your system has a region code printed on the back of the unit and will only play DVDs labeled with identical region code.

DVDs labeled  will also be played on this system.

If you try to play any other DVD, the message "Playback prohibited by area limitations." will appear on the TV screen. Depending on the DVD, no region code indication may be labeled even though playing the DVD is prohibited by area restrictions.

Region code —



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## **Discs that this system cannot play**

- CD-ROMs/CD-Rs/CD-RWs other than those recorded in the following formats:
  - music CD format
  - video CD format
  - MP3 (MPEG1 Audio Layer-3)/JPEG format that conforms to ISO9660\* Level 1/Level 2 or Joliet
- CD-ROMs recorded in PHOTO CD format
- Data part of CD-Extras
- Multi-channel area in the Super Audio CDs which have 2 channel area and multi-channel area.
- DVD-ROMs/DVD-Rs/DVD-RWs/DVD+Rs/ DVD+RWs recorded in DivX format
- DVD-ROMs/DVD-Rs/DVD-RWs/DVD+Rs/ DVD+RWs recorded in Multi Session
- DVD-RAMs
- DVD Audio discs
- A DVD with a different region code.
- Discs with non-standard shapes (e.g., heart, square, star) cannot be played on this unit. Attempting to do so may damage the unit. Do not use such discs.
- A disc with paper or stickers on it.
- A disc that has the adhesive, cellophane tape, or a sticker still left on it.

\* A logical format of files and folders on a CD-ROMs, defined by ISO (International Organization for standardization)

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## **Notes about CD-R/CD-RW/ DVD-R/DVD-RW/DVD+R/ DVD+RW**

- In some cases, CD-Rs, CD-RWs, DVD-Rs, DVD-RWs, DVD+R or DVD+RW cannot be played on this system depending upon the recording quality or physical condition of the disc, or the characteristics of the recording device. Furthermore, the disc will not play if it has not been correctly finalized. For more information, see the operating instructions for the recording device.
- A disc recorded in packet write format cannot be played.

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## **Note on playback operations of DVDs and VIDEO CDs**

Some playback operations of DVDs and VIDEO CDs may be intentionally set by software producers. Since this system plays DVDs and VIDEO CDs according to the disc contents the software producers designed, some playback features may not be available. Also, refer to the instructions supplied with the DVDs or VIDEO CDs.

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## **Music discs encoded with copyright protection technologies**

This product is designed to playback discs that conform to the Compact Disc (CD) standard. Recently, various music discs encoded with copyright protection technologies are marketed by some record companies. Please be aware that among those discs, there are some that do not conform to the CD standard and may not be playable by this product.

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## **Note on DualDiscs**

A DualDisc is a two sided disc product which mates DVD recorded material on one side with digital audio material on the other side. However, since the audio material side does not conform to the Compact Disc (CD) standard, playback on this product is not guaranteed.

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## **Cautions when playing a disc that is recorded in Multi Session**

- This system can play Multi Session CDs when an MP3 audio track is contained in the first session. Any subsequent MP3 audio tracks recorded in later sessions can also be played back.
- This system can play Multi Session CDs when a JPEG image file is contained in the first session. Any subsequent JPEG image files recorded in later sessions can also be played back.
- If audio tracks and images in music CD format or video CD format are recorded in the first session, only the first session will be played back.
- CD-R and CD-RW discs recorded in multi-session that have not ended by “closing the session” are not supported.

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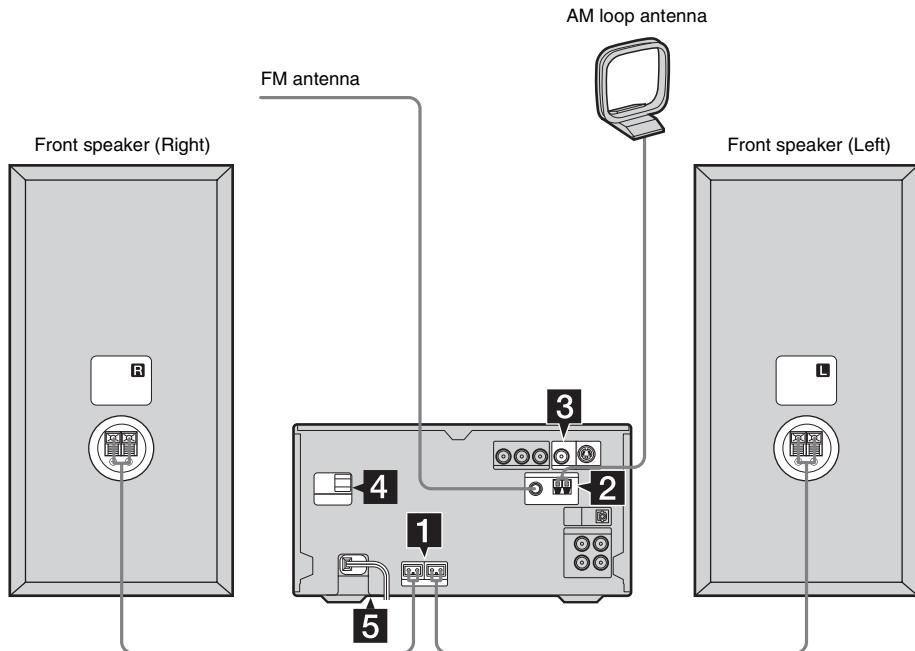
## **Copyrights**

This product incorporates copyright protection technology that is protected by U.S. patents and other intellectual property rights. Use of this copyright protection technology must be authorized by Macrovision, and is intended for home and other limited viewing uses only unless otherwise authorized by Macrovision. Reverse engineering or disassembly is prohibited.

## Getting Started

# Hooking up the system

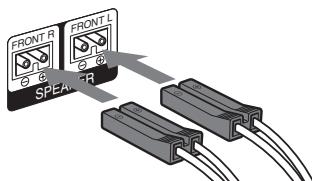
Perform the following procedures **1** to **6** to hook up your system using the supplied cords and accessories.



### 1 Connect the speakers.

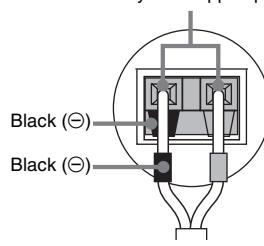
Connect the right and left speaker cords to the SPEAKER terminals on the unit and the terminals on the rear of the speakers as shown below.

#### Main unit



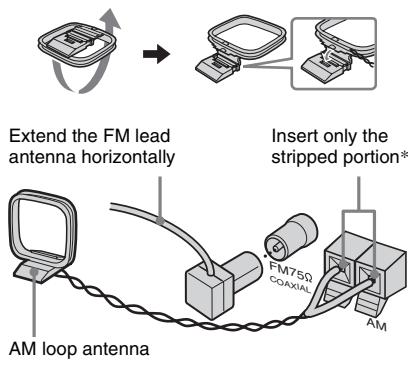
#### Speakers

Insert only the stripped portion



## 2 Connect the FM and AM antennas.

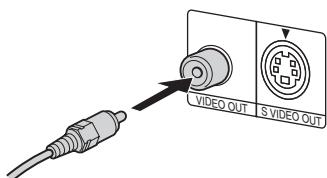
Set up the AM loop antenna, then connect it.



### Note

Keep the antennas away from the speaker cords.

## 3 Connect the video input jack of your TV to the VIDEO OUT jack with the supplied video cable.

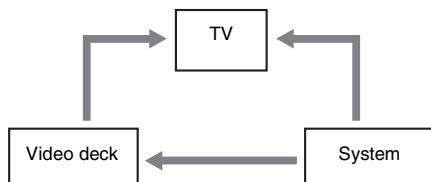


### When using a TV

Turn on the TV and select the video input so that you can view the pictures from this system.

### When connecting a video deck

Connect the TV and the video deck using video and audio cords (not supplied) as shown below.



If the picture has disturbance or there is noise in the audio when a TV, a video deck and this system are all connected at the same time, disconnect one of them.

### Note

Do not place the TV on this system.

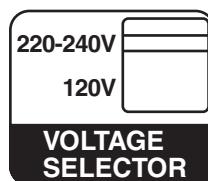
### Tip

For even higher quality video images:

- Use an optional component video cord to connect the COMPONENT VIDEO input jacks on your TV to the COMPONENT VIDEO OUT jacks of this system. If your TV is compatible with progressive format file signals, use this connection and set “PROGRESSIVE AUTO” or “PROGRESSIVE VIDEO” depending on your TV. For details, see “To change the type of signal output from the system” (page 35).
- You can use an optional S video cord to connect the S VIDEO input jack on your TV to the S VIDEO OUT jack.

## 4 For models with a voltage selector, set the VOLTAGE SELECTOR to the local power line voltage.

Depending on the model, the VOLTAGE SELECTOR may differ.



## 5 Connect the power cord to a wall outlet.

The demonstration appears in the display. When you press **I/Off**, the system turns on and the demonstration automatically ends. If the supplied adapter on the plug does not fit your wall outlet, detach it from the plug (only for models equipped with an adapter).

- 6 (Asian and Middle Eastern models only)**  
Set the color system to PAL or NTSC depending on the color system of your TV.

The color system is factory set to NTSC for region code 3 models, and PAL for other region code models. Each time you perform the procedure below, the color system changes as follows:

NTSC ↔ PAL

- 1** Press **I/** to turn off the system.
- 2** Press **I/** on the unit while holding down **II** on the unit.  
The system turns on and the color system is changed.

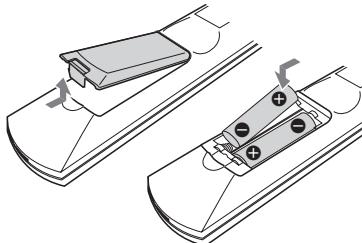
#### Note

When you play back a VIDEO CD recorded in a different color system from the one you set to the unit, the picture image may be distorted.

#### To connect optional components

See page 55.

### Inserting two R6 (size AA) batteries into the remote



#### Note

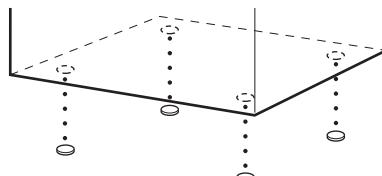
If you do not use the remote for a long period of time, remove the batteries to avoid possible damage from battery leakage and corrosion.

#### Tip

With normal use, the batteries should last for about six months. When the remote no longer operates the system, replace both batteries with new ones.

### Attaching the speaker pads

Attach the supplied speaker pads to the bottom of the speakers to stabilize the speakers and prevent them from slipping.



### When carrying this system

Perform the following procedure to protect the DVD mechanism.

Use buttons on the unit for the operation.

- 1** Press **I/** to turn on the system, then press **DVD**.
- 2** Make sure that no disc is loaded in the system and check that "No Disc" appears.
- 3** Press **I/** to turn off the system and check that "STANDBY" disappears.
- 4** Unplug the power cord.

## Setting the clock

Use buttons on the remote for the operation.

- 1 Press I/⊕ to turn on the system.**
- 2 Press TIMER MENU.**
- 3 Press ↑ or ↓ repeatedly to set the hour.**
- 4 Press ENTER.**
- 5 Press ↑ or ↓ repeatedly to set the minute.**
- 6 Press ENTER.**

The clock starts working.

### To adjust the clock

- 1 Press TIMER MENU.**
- 2 Press ↑ or ↓ to select “CLOCK SET?”, then press ENTER.**
- 3 Do the same procedures as step 3 to 6 above.**

#### Notes

- The clock settings are canceled when you disconnect the power cord or if a power failure occurs.
- You cannot set the clock in Power Saving Mode (page 49).

## Performing the Quick Setup

You can set the initial settings of “OSD”, “TV TYPE” step by step.

After performing the Quick Setup, the system is ready for playing back of movies, music CDs, etc.

European model is used for illustration purposes only.

- 1 Turn on your TV and select the video input.**
- 2 Press I/⊕ to turn on the system.**
- 3 Press FUNCTION + or – repeatedly (or DVD on the unit) to switch the function to DVD.**

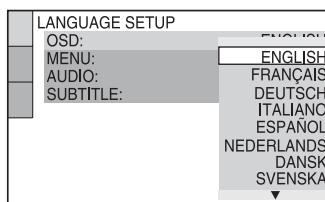
The guide message appears on the TV screen.

#### Notes

- When a disc is in the system or the disc tray opens, the guide message does not appear on the TV screen. Remove the disc.
- When you press CLEAR, the guide message disappears. When you need to perform the Quick Setup, see “To recall the Quick Setup display” (page 12).

- 4 Press ENTER.**

“LANGUAGE SETUP” appears.



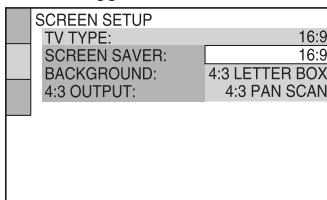
The language you select in “LANGUAGE SETUP” is for “OSD”, “MENU” and “SUBTITLE” (page 33).

- 5 Press ↑ or ↓ repeatedly to select a language used in the on-screen display.**

The selectable language is different depending on the area.

## **6 Press ENTER.**

The setting is selected and “SCREEN SETUP” appears.



## **7 Press $\uparrow$ or $\downarrow$ repeatedly to select the setting that matches your TV type.**

■ When you connect a 4:3 standard TV  
“4:3 LETTER BOX” or “4:3 PAN SCAN”  
(page 33)

■ When you connect a wide-screen TV  
or a 4:3 standard TV with a wide-screen mode

“16:9” (page 33)

## **8 Press ENTER.**

The Quick Setup is complete.

### **If you make a mistake**

Press  $\text{◀◀}$ , then select the item again.

### **To quit the Quick Setup**

Press  $\text{□}$  DISPLAY.

### **To recall the Quick Setup display**

- 1 Press  $\text{□}$  DISPLAY in stop mode.  
The Control menu appears.
- 2 Press  $\uparrow$  or  $\downarrow$  repeatedly to select “SETUP”,  
then press ENTER.  
The options for “SETUP” appears.
- 3 Press  $\uparrow$  or  $\downarrow$  repeatedly to select “QUICK”,  
then press ENTER.  
The Quick Setup display appears.

#### **Note**

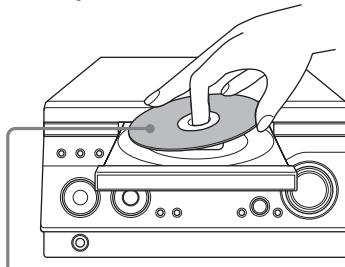
If you want to change each setting, see “Using the Setup Display” (page 32).

DVD/VIDEO CD/CD/Super Audio CD/  
MP3/JPEG – Play

## Loading a disc

Use buttons on the unit for the operation.

- 1 Press I/⊕ to turn on the system.**
- 2 Press ▲.**
- 3 Place a disc with the label side up on the disc tray.**



When you play an 8 cm CD/DVD,  
place it on the inner circle of the tray.

- 4 Press ▲ again to close the disc tray.**

### Notes

- Do not use a disc with tape, seals or paste on it as this may cause malfunction.
- Do not forcibly press the disc tray closed with your finger, as this may cause malfunction.
- When you eject a disc, handle the disc by its edge. Do not touch the surface.
- Do not place two discs on the disc tray.

## Playing a disc

DVD-V

DVD-RW

VIDEO  
CD

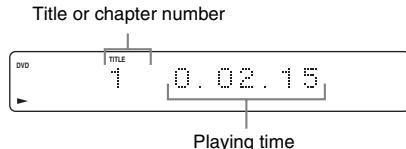
SA-CD  
CD

DATA CD

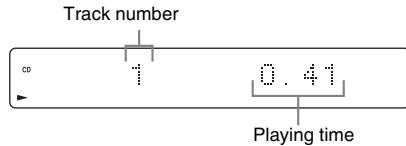
Before playing a DVD, VIDEO CD or JPEG, turn on your TV and select the video input.

Depending on the DVD or VIDEO CD, some operations may be different or restricted. Refer to the operating instructions supplied with the disc.

### Example: When a DVD disc is loaded



### Example: When a CD disc is loaded



- 1 Press FUNCTION + or – repeatedly (or DVD on the unit) to switch the function to DVD.**

- 2 Press ▶.**

### Tip

Depending on the disc you load, the disc may playback automatically.

*continued*

## Other operations

To	Do this
Stop play	Press ■.
Pause	Press ■. <sup>1)</sup> Press ■ again or press ▶ to resume play.
Select a chapter, scene or track (Except for JPEG)	Press ▲◀ or ▲▶ repeatedly during play or pause. Or, press the number buttons in stop mode, then press ENTER <sup>2)</sup> .
Select an album of MP3/JPEG	Press ALBUM + or – repeatedly during play or pause.
Locate a point quickly in fast forward or fast reverse (Scan) (Except for JPEG) <sup>3)</sup>	Press ▲◀ or ▲▶ during play. Each time you press the button, the playback speed changes cyclically as follows: <b>Playback direction<sup>4)</sup></b> → ×2▶ <sup>5)</sup> → 1▶ → 2▶ → 3▶ <sup>6)</sup> <b>Opposite direction<sup>4)</sup></b> → ×2◀ <sup>7)</sup> → 1◀ → 2◀ → 3◀ <sup>6)</sup> To return to Normal Play, press ▶.
Watch frame by frame (Slow-motion Play) (DVD VIDEO/ DVD-RW/ VIDEO CD only) <sup>3)</sup>	Press ■ during play, then press ▲◀ SLOW or SLOW ▶. Each time you press the button, the playback speed changes as follows: <b>Playback direction<sup>8)</sup></b> 2▶ ← 1▶ <b>Opposite direction (DVD VIDEO/DVD-RW only)<sup>8)</sup></b> 2◀ ← 1◀ To return to Normal Play, press ▶.
Play one frame at a time (Freeze frame) (DVD VIDEO/ DVD-RW/ VIDEO CD only)	Press ■ during play, then press STEP ▶ to go to the next frame or press ▲◀ STEP to go to the previous frame (DVD VIDEO/ DVD-RW only).
Replay the previous scene (Instant Replay) (DVD VIDEO/ DVD-RW only)	Press ▲◀ REPLAY during play.

To	Do this
Briefly fast forward the current scene (Instant Advance) (DVD VIDEO/ DVD-RW only)	Press ADVANCE ▶ during play.
Switch to DVD function from another source	Press DVD on the unit.
Remove a disc	Press △ on the unit.

<sup>1)</sup> There may be some disturbance in the video image.

<sup>2)</sup> Except for MP3/JPEG

<sup>3)</sup> No sound is output depending on the audio source.

<sup>4)</sup> The ×2▶/×2◀ playback speed is about twice the normal speed. The 3▶/3◀ playback speed is faster than the 2▶/2◀ and the 2▶/2◀ playback speed is faster than the 1▶/1◀.

<sup>5)</sup> DVD VIDEO/CD/Super Audio CD only

<sup>6)</sup> DVD VIDEO/DVD-RW/VIDEO CD only

<sup>7)</sup> DVD VIDEO only

<sup>8)</sup> The 2▶/2◀ playback speed is slower than 1▶/1◀.

### Notes

- You cannot perform Instant Replay and Instant Advance in Repeat Play mode (page 18).
- You cannot search for a still picture on a DVD-RW in VR mode.
- Depending on the DVD or VIDEO CD, some operations may be restricted.
- The following discs take a longer time to start playback.
  - a disc recorded with complicated tree structure.
  - a disc recorded in Multi Session.
  - a disc to which data can be added (non-finalized disc).
- Some DVD-Rs/DVD-RWs/DVD+Rs/DVD-RWs or CD-Rs/CD-RWs cannot be played on this system depending on file format.

### Tips

- The Instant Replay function is useful when you want to review a scene or dialogue that you missed.
- The Instant Advance function is useful when you want to pass over a scene that you do not want to watch.
- You may not be able to use the Instant Replay or Instant Advance function with some scenes.

## To select a playback layer on a hybrid Super Audio CD

Some Super Audio CDs consist of an HD layer and a CD layer. You can select the playback layer you want to listen to.

### Press SA-CD/CD on the unit in stop mode.

Each time you press the button, an HD layer or a CD layer is alternately selected. When playing a CD layer, the “CD” indicator in the front panel display lights up.

#### Notes

- For details about Super Audio CDs, see page 72.
- Each play mode function works only within the selected layer.
- When playing a 2 channel+Multi-channel Super Audio CD, only the 2 channel playback area is played.
- When playing a Multi-channel Super Audio CD, multi-channel audio is automatically downmixed to 2 channel stereo.

## Resuming playback from the point you stopped the disc

### — Resume Play

This system memorizes the point where you stopped the disc so you can resume from that point. Resume Play is not canceled when you turn off the system (except for MP3/JPEG).

### 1 While playing a disc, press ■ to stop playback.

“Resume” appears in the display. If “Resume” does not appear, Resume Play is not available.

### 2 Press ▶.

The system starts playback from the point where you stopped the disc in step 1.

#### Notes

- You cannot perform Resume Play during Shuffle Play or Program Play.
- Resume Play may not work with some discs.
- Depending on where you stopped the disc, the system may resume playback from a different point.

- Resume play point is cleared when:

- you press ■ in stop mode.
- you disconnect the power cord.
- you open the disc tray (except for DVD VIDEO/VIDEO CD when “MULTI-DISC RESUME” in “CUSTOM SETUP” is set to “ON”).
- you change the play mode.
- you turn off the system (MP3/JPEG only).
- you change the function (except for DVD VIDEO/VIDEO CD when “MULTI-DISC RESUME” in “CUSTOM SETUP” is set to “ON”).

## To enjoy a disc that is played before by resume playback

### — Multi-disc Resume (DVD VIDEO/VIDEO CD only)

This system memorizes the point where you stopped the disc for up to 40 discs and resumes playback the next time you insert the same disc. If you store a resume playback point for the 41st disc, the resume playback point for the first disc is deleted.

To activate this function, set “MULTI-DISC RESUME” in “CUSTOM SETUP” to “ON” (page 36).

#### Notes

- If “MULTI-DISC RESUME” in “CUSTOM SETUP” is set to “OFF” (page 36), the resume point is cleared when you change the function.
- If “MULTI-DISC RESUME” in “CUSTOM SETUP” is set to “ON” (page 36) and you playback a recorded disc such as DVD-RW, the system may playback other recorded discs from the same resume point. To play from the beginning, press ■ twice, then press ▶.

# Creating your own program

## — Program Play —



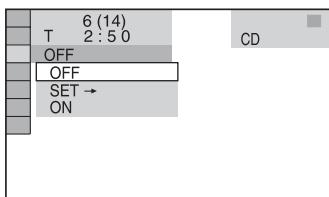
You can make a program of up to 99 steps.

- 1** Press DISPLAY in stop mode.

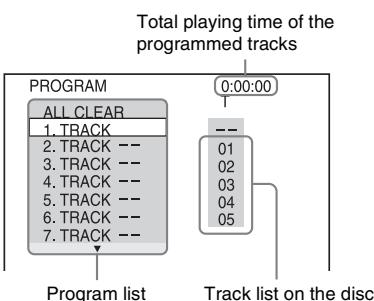
The Control Menu appears.

- 2** Press or repeatedly to select “PROGRAM”, then press ENTER.

The options for “PROGRAM” appear.

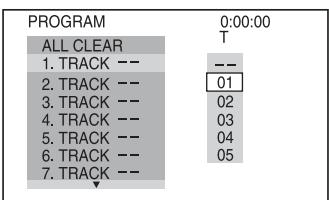


- 3** Press or repeatedly to select “SET →”, then press ENTER.



- 4** Press .

The cursor moves to the track list (in this case, “01”).

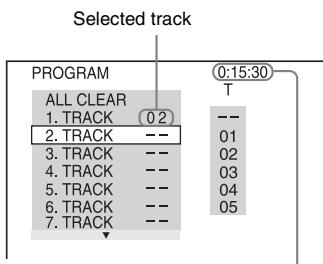


- 5** Press or repeatedly to select the track you want to program, then press ENTER.

The selected track is programmed and the cursor moves to the program list.

For example, select track “02”.

The track number may be displayed in 3 digits for a Super Audio CD.



Total playing time of the programmed tracks

- 6** Repeat steps 4 to 5 to program other tracks.

The programmed tracks are displayed in the selected order.

- 7** Press .

Program Play starts.

## Other operations

To	Do this
Turn off the Program	Press  DISPLAY.
Display	
Check the program	Perform steps 1 to 3.

## To cancel Program Play

Press CLEAR, or select “OFF” in step 3. To play the same program again, select “ON” in step 3, then press ENTER.

## To change a programmed track

- After step 3, press or repeatedly to select the programmed track you want to change, then press .
- Press or repeatedly to select the track you want to program, then press ENTER. The selected track in the program list is replaced by the newly selected track.

## To clear a programmed track

- After step 3, press **↑** or **↓** to select the programmed track you want to clear in the program list.
- Press **CLEAR**.  
Or, press **→**, then press **↑** repeatedly to select “–” in the track list and then press **ENTER**.

## To cancel all the programmed tracks

In step 4, press **↑** repeatedly to select “ALL CLEAR” in the program list, then press **ENTER**.

## To turn off the Control Menu

Press **DISPLAY** repeatedly until the Control Menu disappears.

### Notes

- Program Play is not available for DVD, MP3 and JPEG.
- You cannot perform Program Play during PBC playback of VIDEO CDs and Super VCDs (page 20).
- When you switch the play mode to Program Play while a “REPEAT” option other than “OFF” is selected, “REPEAT” is automatically set to “ON” (page 18).
- The program is cleared when:
  - you turn off the system.
  - you open the disc tray.
  - you change the function.

### Tips

- The program you made remains after Program Play finishes. To play the same program again, make sure to select “ON” in step 3, then press **▷**.
- You can perform Repeat Play or Shuffle Play of programmed tracks. During Program Play, follow the steps of Repeat Play (page 18) or Shuffle Play (page 17).

## Playing in random order

### — Shuffle Play



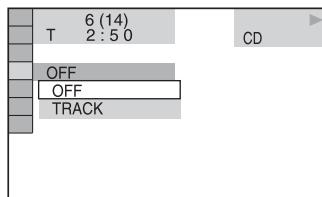
You can play tracks in random order by using the Control Menu in the on-screen display.

- Press **DISPLAY** during play.**

The Control Menu appears.

- Press **↑** or **↓** repeatedly to select “SHUFFLE”, then press **ENTER**.**

The options for “SHUFFLE” appear.



- Press **↑** or **↓** repeatedly to select the item to be shuffled.**

#### ■ When the disc is in Normal Play

TRACK: plays the tracks on the disc in random order.

#### ■ When the disc is in Program Play

ON: plays the programmed tracks in random order.

- Press **ENTER**.**

Shuffle Play starts.

## To cancel Shuffle Play

Press **CLEAR**, or select “OFF” in step 3.

## To turn off the Control Menu

Press **DISPLAY** repeatedly until the Control Menu disappears.

### Note

You cannot perform Shuffle Play during PBC playback of VIDEO CDs and Super VCDs (page 20).

### Tip

You can set Shuffle Play in stop mode. After selecting the “SHUFFLE” option, press **▷** to start Shuffle Play.

# Playing repeatedly

## — Repeat Play



You can play a whole disc or selected album repeatedly or you can also play a single title/chapter/track repeatedly.

You can use a combination of Shuffle or Program Play modes.

## Using the front panel display

Press REPEAT repeatedly during play until “REP” or “REP1” appears.

REP: Repeats a whole disc or selected album<sup>1)</sup>.

REP1: Repeats a single title<sup>2)/chapter<sup>2)/track only.</sup></sup>

<sup>1)</sup> For JPEG, during slide show only

<sup>2)</sup> For DVD, you can check whether a title or chapter is being repeatedly played on the TV screen.

## To cancel Repeat Play

Press REPEAT repeatedly until both “REP” and “REP1” disappear, or press CLEAR.

### Notes

- Depending on the DVD, you cannot perform Repeat Play and Shuffle Play.
- You cannot perform Repeat Play during PBC playback of VIDEO CDs and Super VCDs (page 20).
- You cannot select “REP1” during Program Play and Shuffle Play.
- When you select “REP1”, that title/chapter/track is repeated endlessly until “REP1” is canceled.

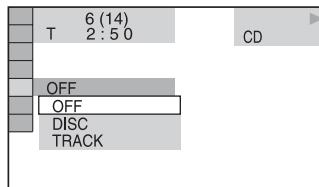
## Using the on-screen display

- 1 Press **DISPLAY** during play.

The Control Menu appears.

- 2 Press **↑** or **↓** repeatedly to select “REPEAT”, then press **ENTER**.

The options for “REPEAT” appear.



- 3 Press **↑** or **↓** repeatedly to select the item to be repeated.

The default setting are underlined.

### ■ When playing a DVD VIDEO/DVD-RW

- OFF: does not play repeatedly.
- DISC\*: repeats all the titles on the disc.
- TITLE: repeats the current title on the disc.
- CHAPTER: repeats the current chapter.

\* When playing a DVD-RW in VR mode, “DISC” repeats all the titles of the selected type (page 20).

### ■ When playing a CD/Super Audio CD/VIDEO CD

- OFF: does not play repeatedly.
- DISC: repeats all the tracks on the disc.
- TRACK: repeats the current track.

### ■ When playing a DATA CD

- OFF: does not play repeatedly.
- DISC: repeats all the albums on the disc.
- ALBUM: repeats the current album.
- TRACK\*: repeats the current track.

\* MP3 audio tracks only.

### ■ When a CD/Super Audio CD/VIDEO CD is in Shuffle Play or Program Play mode

- OFF: does not play repeatedly.
- ON: repeats Shuffle Play or Program Play.

- 4 Press **ENTER**.

Repeat Play starts.

## To cancel Repeat Play

Press CLEAR, or select “OFF” in step 3.

## To turn off the Control Menu

Press  DISPLAY repeatedly until the Control Menu disappears.

### Notes

- Depending on the DVD, you cannot perform Repeat Play.
- You cannot perform Repeat Play during PBC playback of VIDEO CDs and Super VCDs (page 20).
- When playing a disc which contains MP3 audio tracks and JPEG image files, and their playing time are not the same, the audio sound will not match the image.
- When “MODE (MP3, JPEG)” is set to “IMAGE (JPEG)” (page 25), you cannot select “TRACK”.

### Tips

- You can set Repeat Play in stop mode. After selecting the “REPEAT” option, press  to start Repeat Play.
- You can quickly display the “REPEAT” status by pressing REPEAT. Each time you press REPEAT, the “REPEAT” option changes.

## Playing DVDs using the menu



Some DVDs have menus to help you enjoy the DVDs. You can play DVDs using these menus on the TV screen.

### • Using the DVD top menu

A DVD is divided into long sections of a picture or a music feature called “titles”. When you play a DVD which contains several titles, you can select the title you want using the DVD top menu.

### • Using the DVD menu

Some DVDs allow you to select the disc contents using a menu. When you play these DVDs, you can select items such as the language for the subtitles and the language for the sound using the DVD menu.

#### 1 Press TOP MENU or MENU.

The menu appears on the TV screen. The contents of the menu vary from disc to disc.

#### 2 Press , , , or the number buttons to select the title or item you want to play.

#### 3 Press ENTER.

## Selecting “ORIGINAL” or “PLAY LIST” on a DVD-RW



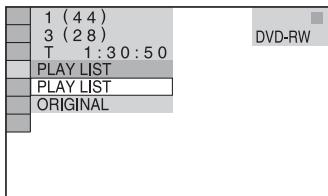
Some DVD-RWs in VR (Video Recording) mode have two types of titles for playback: originally recorded titles (“ORIGINAL”) and titles that can be created on recordable DVD players for editing (“PLAY LIST”). You can select the type of title to be played.

### 1 Press DISPLAY in stop mode.

The Control Menu appears.

### 2 Press or repeatedly to select “ORIGINAL/PLAY LIST”, then press ENTER.

The options for “ORIGINAL/PLAY LIST” appear.



### 3 Press or repeatedly to select the setting you want, then press ENTER.

- PLAY LIST: plays the titles created from “ORIGINAL” for editing.
- ORIGINAL: plays the titles originally recorded.

## Playing VIDEO CDs with PBC functions (Ver. 2.0)

### — PBC Play



You can use PBC\* menus on your TV screen to enjoy the disc’s interactive software. The menu format and structure may differ depending on each disc.

\* PBC: Playback Control

### 1 Press to start playing a VIDEO CD with PBC functions (Ver. 2.0).

The PBC menu appears on the TV screen.

### 2 Press the number buttons to select the item number you want.

### 3 Press ENTER.

### 4 Continue playback according to the instructions on the menus to enjoy interactive playback.

Refer to the operating instructions supplied with the disc, as the operating procedure may differ according to the VIDEO CD.

## To go back to a previous menu

Press RETURN.

### Notes

- Depending on the VIDEO CD, the menu does not appear in step 1.
- Depending on the VIDEO CD, “Press ENTER” in step 3 may appear as “Press SELECT” in the operating instructions supplied with the disc. In this case, press .

### Tip

You can cancel playback with PBC functions.

### 1 In stop mode, press or repeatedly, or the number buttons to select a track.

### 2 Press .

“Play without PBC” appears on the TV screen and playback starts from the selected track. Still images, such as the menu screens, will not be shown.

To return to PBC playback, press twice, then press .

# About MP3 audio tracks and JPEG image files



## What is MP3/JPEG?

MP3 is audio compression technology that satisfies the ISO/MPEG regulations. JPEG is image compression technology.

## Discs that the system can play

You can play back DATA CDs (CD-ROMs/CD-Rs/CD-RWs) recorded in MP3 (MPEG1 Audio Layer 3) and JPEG format. However, the discs must be recorded according to ISO9660 Level 1, Level 2 or Joliet format for the system to recognize the tracks (or files). You can also play discs recorded in Multi Session.

See the instructions supplied with the CD-R/CD-RW drives and the recording software (not supplied) for details on the recording format.

## About the multi-session disc

If MP3 audio tracks or JPEG image files are recorded in the first session, the system will also play MP3 audio tracks or JPEG image files in other sessions. If audio tracks and images in audio CD format or video CD format are recorded in the first session, only the first session will be played back.

### Note

The system may not be able to play some DATA CDs created in the Packet Write format. In this case, you cannot view the JPEG images recorded.

## MP3 audio track or JPEG image file that the system can play

The system can play the MP3 audio tracks or JPEG image files:

- which have the extension “.MP3” (MP3 audio track) or “.JPG”/“.JPEG” (JPEG image file)
- which conform to the DCF\* image file format

\* “Design rule for Camera File system”: Image standards for digital cameras regulated by Japan Electronics and Information Technology Industries Association (JEITA).

### Notes

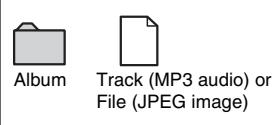
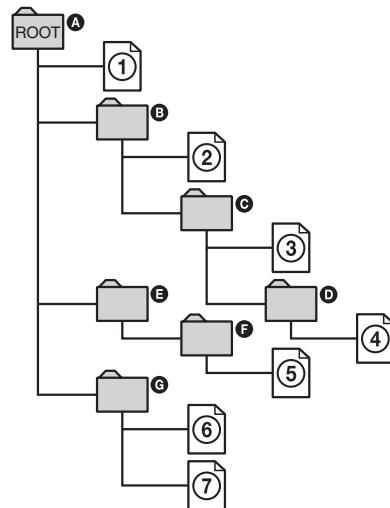
- The system will play any data with the extension “.MP3”, “.JPG” or “.JPEG” even if they are not in MP3 or JPEG format. Playing this data may generate a loud noise which could damage your speaker system.
- The system does not conform to audio in MP3PRO format.

## Playback order of MP3 audio tracks or JPEG image files

The playback order of MP3 audio tracks or JPEG image files recorded on a DATA CD is as follows:

### ■ Structure of disc contents

Tree 1    Tree 2    Tree 3    Tree 4    Tree 5



*continued*

When you insert a DATA CD and press ▶, the numbered tracks (or files) are played sequentially, from ① through ⑦. Any sub-albums/tracks (or files) contained within a currently selected album take priority over the next album in the same tree. (Example: ④ contains ⑤ so ④ is played before ⑤.)

When you press MENU and the list of album names appears (page 23), the album names are arranged in the following order:

**A** → **B** → **C** → **D** → **F** → **G**. Albums that do not contain tracks (or files) (such as album **E**) do not appear in the list.

#### Notes

- Depending on the software you use to create the DATA CD, the playback order may differ from the illustration.
- The playback order above may not be applicable if there are more than 200 albums and 300 files in each album.
- The system can recognize up to 200 albums (the system will count just albums, including albums that do not contain MP3 audio tracks and JPEG image files). The system will not play any albums beyond the 200th album.
- The system may take longer time to playback, when progressing to the following album or jump to other album.
- Some type of JPEG files cannot be played.

#### Tips

- If you add numbers (01, 02, 03, etc.) to the front of the track/file names when you store the tracks (or files) in a disc, the tracks and files will be played in that order.
- Since a disc with many trees takes longer to start playback, it is recommended that you create albums with no more than two trees.

## Playing DATA CDs with MP3 audio track and JPEG image files

### DATA CD

MP3 audio tracks and JPEG image files recorded on DATA CDs (CD-ROMs/CD-Rs/CD-RWs) can be played on this system.

#### Notes

- When “MODE (MP3, JPEG)” is set to “AUTO”, the system can recognize up to 300 MP3 tracks and 300 JPEG files in a single album. When “MODE (MP3, JPEG)” is set to “AUDIO (MP3)” or “IMAGE (JPEG)”, the system can recognize up to 600 MP3 and 600 JPEG files in a single album. A maximum of 200 albums can be recognized regardless of the selected mode.
- Playback is possible up to 8 levels.
- An album that does not include an MP3 audio track or JPEG image file is skipped.
- If you put the extension “.MP3” to data not in MP3 format, the system cannot recognize the data properly and will generate a loud noise which could damage your speaker system.

#### Tips

- You can view the disc information while playing MP3 audio tracks and JPEG image files (page 50).
- You can select Repeat Play while playing MP3 audio tracks and JPEG image files (page 18) and “AUDIO” while playing an MP3 audio track (page 30).

## Selecting an album

### 1 Load a DATA CD.

The album list appears. When an album is being played, its title is shaded.



### 2 Press $\uparrow$ or $\downarrow$ repeatedly to select the album you want, then press $\triangleright$ .

For MP3, the system starts playing the selected album.

For JPEG, the system starts a slide show of the images in the selected album.

### To turn on or off the album list

Press MENU.

### To stop play

Press ■.

#### Note

The slide show stops when you press  $\uparrow$  or  $\downarrow$ .

#### Tip

You can change the slide show duration (page 26) and effect (page 26) while playing JPEG image file.

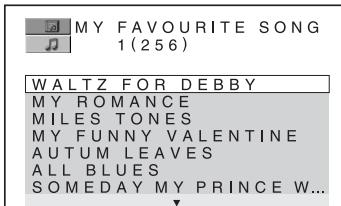
## Selecting an MP3 audio track

### 1 Load a DATA CD.

The album list appears. When an album is being played, its title is shaded.

### 2 Press $\uparrow$ or $\downarrow$ repeatedly to select an album, then press ENTER.

The track list appears.



### 3 Press $\uparrow$ or $\downarrow$ repeatedly to select the desired track, then press ENTER.

The system starts playing the selected track.

### To stop play

Press ■.

### To play the next or previous MP3 audio track

Press  $\blacktriangleleft$  or  $\triangleright$ . You can select the first track of the next album by pressing  $\triangleright$  during playback of the last track of the current album. Note that you cannot return to the previous album by pressing  $\blacktriangleleft$ . To return to the previous album, select the album from the album list.

### To return to the previous display

Press  $\circlearrowleft$  RETURN.

### To turn on or off the display

Press MENU.

*continued*

## Selecting a JPEG image file

### 1 Load a DATA CD.

The album list appears. When an album is being played, its title is shaded.

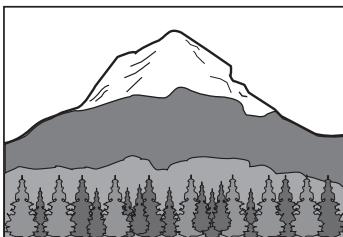
### 2 Press $\uparrow$ or $\downarrow$ repeatedly to select an album, then press PICTURE NAVI.

Images of files in the album appear in 16 subscreens.

1	2	3	4
5	6	7	8
9	10	11	12
13	14	15	16

To display the hidden image files, select the bottom image, then press  $\downarrow$ . To return to the previous image, select the top image, then press  $\uparrow$ .

### 3 Press $\uparrow/\downarrow/\leftarrow/\rightarrow$ repeatedly to select the image you want to view, then press ENTER.



## To stop play

Press ■.

### Note

PICTURE NAVI does not work when “MODE (MP3, JPEG)” is set to “AUDIO (MP3)” (page 25).

## To play the next or previous JPEG image file

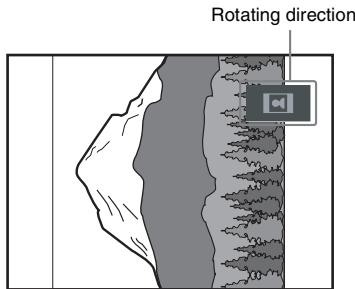
Press  $\leftarrow$  or  $\rightarrow$  when the Control Menu is not displayed. You can select the first image of the next album by pressing  $\rightarrow$  during playback of the last image of the current album. Note that you cannot return to the previous album by pressing  $\leftarrow$ . To return to the previous album, select the album from the album list.

## To rotate a JPEG image

When a JPEG image file is displayed on the screen, you can rotate the image by 90 degrees. Press  $\uparrow$  or  $\downarrow$  while viewing an image. Each time you press  $\uparrow$ , the image rotates counterclockwise by 90 degrees.

Press CLEAR to return to normal view.

### Example: When you press $\uparrow$ once



### Notes

- Nothing happens when you press  $\leftarrow$  while playing the first image file of the album.
- If you press  $\leftarrow$  or  $\rightarrow$  to go to the next or previous image, the “Rotating a JPEG image” function is canceled.

# Playing audio tracks and images as a slide show with sound

## DATA CD

You can play a slide show with sound by first placing both MP3 and JPEG files in the same album on a DATA CD.

### 1 Load a DATA CD.

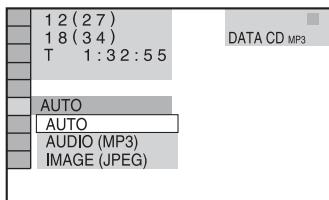
The album list appears.

### 2 Press DISPLAY repeatedly until the Control Menu disappears, then press DISPLAY once.

The Control Menu for MP3 appears.

### 3 Press or repeatedly to select “MODE (MP3, JPEG)”, then press ENTER.

The options for “MODE (MP3, JPEG)” appear.



### 4 Press or repeatedly to select “AUTO”, then press ENTER.

The default setting is underlined.

- **AUTO:** plays both the JPEG image files and MP3 audio tracks in the same album as a slide show.
- **AUDIO (MP3):** plays only MP3 audio tracks continuously.
- **IMAGE (JPEG):** plays only JPEG image files as a slide show.

### 5 Press MENU.

The album list appears.

- ### 6 Press or repeatedly to select the album you want, then press .

The system starts the slide show with sound.

## To turn on or off the album list

Press MENU.

## To stop play

Press .

## To cancel slide show with sound

Select “AUDIO (MP3)” or “IMAGE (JPEG)” in step 4.

## Notes

- You cannot playback JPEG image files and MP3 audio tracks at the same time if they are not contained in the same album.
- When the JPEG image file’s playback duration is longer than the MP3 audio track, the image slide show continues without sound.
- When the MP3 audio track is longer than the JPEG image file’s playback duration, the audio track continues with no slide show.
- If there are no MP3 audio tracks and JPEG image files in the DATA CD, the “No audio data” and “No image data” messages appear on the TV screen.
- PICTURE NAVI does not work when “MODE (MP3, JPEG)” is set to “AUDIO (MP3)”.
- If you play large MP3 audio track data and JPEG image data at the same time, the sound may skip. It is recommended that you set the MP3 bit rate to 128 kbps or lower when creating the file. If the sound still skips, then reduce the size of the JPEG file.

## Tips

- You can also change the slide show duration (page 26) and effect (page 26) while playing JPEG image files.
- If you want to play a slide show to the same audio track, set the track to Repeat Play (page 18).
- When “MODE (MP3, JPEG)” is set to “AUTO”, the system can recognize up to 300 MP3 tracks and 300 JPEG files in a single album. When “MODE (MP3, JPEG)” is set to “AUDIO (MP3)” or “IMAGE (JPEG)”, the system can recognize up to 600 MP3 and 600 JPEG files in a single album. A maximum of 200 albums can be recognized regardless of the selected mode.
- All the Control Menu items cannot be displayed by pressing DISPLAY once. In this case, press the button twice or more until the desired item appears.

***continued***

## Specifying the slide show duration (JPEG only)

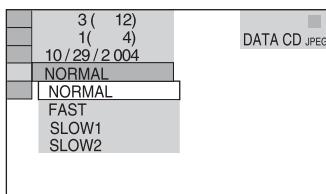
When you play JPEG image files using slide show, you can specify the duration for slides to appear on the screen.

- 1 Press  **DISPLAY** repeatedly until the Control Menu disappears, then press  **DISPLAY** twice.

The Control Menu for JPEG appears.

- 2 Press  or  repeatedly to select “INTERVAL”, then press **ENTER**.

The options for “INTERVAL” appear.



- 3 Press  or  repeatedly to select the setting you want, then press **ENTER**.

The default setting is underlined.

- NORMAL: sets the duration to about 6 to 9 seconds. (Images that are four million pixels or more will lengthen the duration.)
- FAST: sets the duration shorter than “NORMAL”.
- SLOW1: sets the duration longer than “NORMAL”.
- SLOW2: sets the duration longer than “SLOW1”.

### Note

Some JPEG files may take longer to display than others, which may make the duration seem longer than the option you selected. Especially progressive JPEG files or JPEG files of 3,000,000 pixels or more.

## Selecting an effect for image files in the slide show (JPEG only)

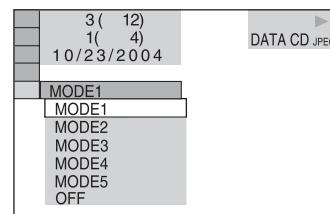
When you play a JPEG image file, you can select the effect to be used when viewing the slide show.

- 1 Press  **DISPLAY** repeatedly until the Control Menu disappears, then press  **DISPLAY** twice.

The Control Menu for JPEG appears.

- 2 Press  or  repeatedly to select “EFFECT”, then press **ENTER**.

The options for “EFFECT” appear.



- 3 Press  or  repeatedly to select the setting you want, then press **ENTER**.

The default setting is underlined.

- MODE1: The image sweeps in from top to bottom.
- MODE2: The image stretches out from left to right of the screen.
- MODE3: The image stretches out from the center of the screen.
- MODE4: The images randomly cycle through the effects.
- MODE5: The next image slides over the previous image.
- OFF: Turns off this function.

# Using the on-screen display to search



You can search for a DVD by title or chapter, and you can search for a VIDEO CD/CD/Super Audio CD/DATA CD by track, file, album, index or scene. As titles and tracks are assigned unique numbers on the disc, you can select the desired one by entering its number. Or, you can search for a particular point using the time code (Time Search).

- 1 Press DISPLAY.**  
For DATA CD with JPEG image files, press DISPLAY twice.

The Control Menu appears.

- 2 Press or repeatedly to select the search method.**

- When playing a DVD VIDEO/DVD-RW  
“TITLE”, “CHAPTER” or “TIME/TEXT”

Select “TIME/TEXT” to search for a starting point by inputting the time code.

- When playing a VIDEO CD without PBC function

“TRACK” or “INDEX”

- When playing a VIDEO CD with PBC function

“SCENE”

- When playing a CD

“TRACK”

- When playing a Super Audio CD

“TRACK” or “INDEX”

- When playing a DATA CD (MP3 audio track)

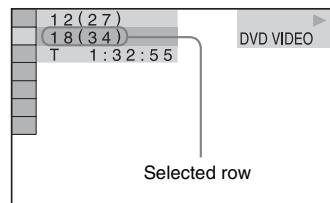
“ALBUM” or “TRACK”

- When playing a DATA CD (JPEG image file)

“ALBUM” or “FILE”

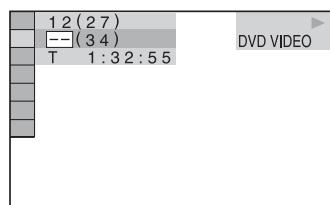
Example: When you select “CHAPTER” “\*\* (\*\*\*)” is selected (\*\* refers to a number).

The number in parentheses indicates the total number of titles, chapters, tracks, indexes, scenes, albums or files.



- 3 Press ENTER.**

“\*\* (\*\*\*)” changes to “– (\*\*)”.



- 4 Press or repeatedly, or press the number buttons to select the title, chapter, track, index, scene, etc., number you want to search for.**

If you make a mistake, press CLEAR to cancel the number, then select another number.

- 5 Press ENTER.**

Playback starts from the selected track.

## To turn off the Control Menu

Press DISPLAY repeatedly until the Control Menu disappears.

## To cancel searching

Press .

*continued*

## To search for a particular point using the time code (DVD only)

### — Time Search

- 1 In step 2, select “TIME/TEXT”.  
“T \*\*\*:\*\*\*:\*\*\*” (playing time of the current title) is selected.
- 2 Press ENTER.  
“T \*\*\*:\*\*\*:\*\*\*” changes to “T --:--:--”.
- 3 Input the time code using the number buttons, then press ENTER.  
For example, to find the scene at 2 hours, 10 minutes, and 20 seconds after the beginning, just enter “2:10:20”.

#### Notes

- You cannot search for a scene on a DVD+RW using the time code.
- The title, chapter or track number displayed on the TV screen is recorded data on the disc.

#### Tips

- When the Control Menu display is turned off, you can search for a chapter (DVD VIDEO/DVD-RW) or track (CD, Super Audio CD) by pressing the number buttons and ENTER.
- You can view the playing time or remaining time of the disc. For details, see “Viewing information about the disc in the on-screen display” on page 51.

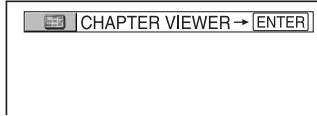
## Searching by Scene

### — Picture Navigation



You can divide the screen into 9 subscreens and find the desired scene quickly.

- 1 Press PICTURE NAVI during play.



- 2 Press PICTURE NAVI repeatedly to select an item.

#### ■ When playing a DVD VIDEO

TITLE VIEWER: displays the first scene of each title.  
CHAPTER VIEWER: displays the first scene of each chapter.

#### ■ When playing a VIDEO CD

TRACK VIEWER: displays the first scene of each track.

- 3 Press ENTER.

The first scene of each chapter, title, or track appears as follows.

1	2	3	
4	5	6	
7	8	9	▼

When there are more than 9 titles, chapters, or tracks, “▼” appears at the bottom right of the TV screen.

To display the hidden titles, chapters or tracks, select the bottom scene, then press ↓. To return to the previous scene, select the top scenes, then press ↑.

- 4** Press  $\uparrow/\downarrow/\leftarrow/\rightarrow$  repeatedly to select a chapter, title or track, then press ENTER.

Playback starts from the selected scene.

### To return to Normal Play

Press  $\odot$  RETURN or  $\square$  DISPLAY.

#### Note

Depending on the disc, you may not be able to select some items.

## DVD/VIDEO CD/CD/Super Audio CD/ MP3/JPEG – Various functions

### Changing the sound

DVD-V

DVD-RW

VIDEO  
CD

SA-CD  
CD

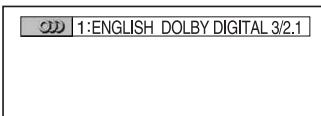
DATA CD

When playing a DVD VIDEO, you can change the audio format. If the DVD VIDEO is recorded with multilingual tracks, you can also change the language.

With VIDEO CDs, CDs or DATA CDs (MP3), you can select the sound from the right or left channel and listen to the sound of the selected channel through both the right and left speakers. For example, when playing a disc containing a song with the vocals on the right channel and the instruments on the left channel, you can hear the instruments from both speakers by selecting the left channel.

#### 1 Press AUDIO during play.

The following display appears.



#### 2 Press AUDIO repeatedly to select the desired audio signal.

##### ■ When playing a DVD VIDEO

Depending on the DVD VIDEO, the choice of language varies.

When 4 digits are displayed, they indicate a language code (see “Language code list” (page 67)). When the same language is displayed two or more times, the DVD VIDEO is recorded in multiple audio formats.

#### ■ When playing a DVD-RW

The types of sound tracks recorded on a disc are displayed. The default setting is underlined.

Example:

- 1: MAIN (main sound)
- 1: SUB (sub sound)
- 1: MAIN+SUB (main and sub sound)
- 2: MAIN
- 2: SUB
- 2: MAIN+SUB

#### ■ When playing a VIDEO CD/CD/DATA CD (MP3 audio tracks)

The default setting is underlined.

- STEREO: the standard stereo sound
- 1/L: the sound of the left channel (monaural)
- 2/R: the sound of the right channel (monaural)

#### ■ When playing a Super VCD

The default setting is underlined.

- 1:STEREO: the stereo sound of the audio track 1
- 1:1/L: the sound of the left channel of the audio track 1 (monaural)
- 1:2/R: the sound of the right channel of the audio track 1 (monaural)
- 2:STEREO: the stereo sound of the audio track 2
- 2:1/L: the sound of the left channel of the audio track 2 (monaural)
- 2:2/R: the sound of the right channel of the audio track 2 (monaural)

#### Notes

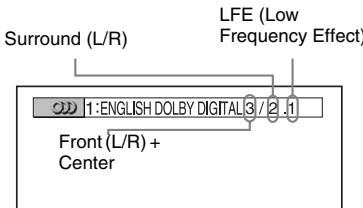
- While playing a DVD-RW on which the audio stream 2 is not recorded, you may not be able to select “2: MAIN”, “2: SUB” or “2: MAIN+SUB”.
- While playing a Super VCD on which the audio track 2 is not recorded, no sound is output when you select “2:STEREO”, “2:1/L” or “2:2/R”.
- You cannot change the sound for Super Audio CDs and DTS CDs by pressing AUDIO.

## Checking the audio signal format (DVD only)

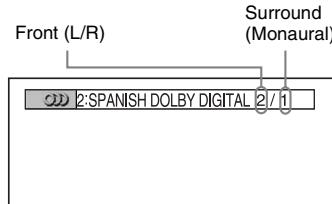
When you press AUDIO repeatedly during play, the format of the current audio signal (PCM, Dolby Digital, DTS, etc.) is displayed as shown below.

### ■ When playing a DVD VIDEO

Example: Dolby Digital 5.1 ch



Example: Dolby Digital 3 ch



## About audio signals

Audio signals recorded in a disc contain the sound elements (channels) shown below.

- Front (L)
- Front (R)
- Center
- Surround (L)
- Surround (R)
- Surround (Monaural): This signal can be either the Dolby Surround Sound processed signals or the Dolby Digital sound's monaural Surround audio signals.
- LFE (Low Frequency Effect) signal

## Adjusting the delay between the picture and sound

### — A/V SYNC



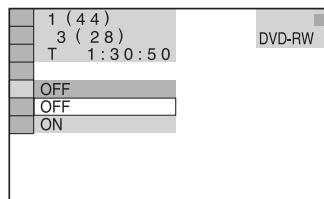
When the sound does not match the pictures on the screen, you can adjust the delay between the picture and sound.

- 1 Press DISPLAY in stop mode.**

The Control Menu appears.

- 2 Press or repeatedly to select "A/V SYNC", then press ENTER.**

The options for "A/V SYNC" appear.



- 3 Press or repeatedly to select the setting.**

- OFF: does not adjust.
- ON: adjusts the difference between picture and sound.

### Note

Depending on the input stream, this function may not be effective.

# Using the Setup Display

By using the Setup Display, you can make various adjustments to items such as picture and sound. You can also set a language for the subtitles and the Setup Display, among other things. For details on each Setup Display item, see pages from 33 to 36. For an overall list of Setup Display items, see page 70.

European model is used for illustration purposes only.

## Note

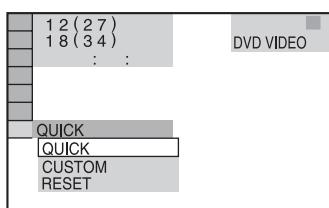
Playback settings stored in the disc take priority over the Setup Display settings and not all the functions described may work.

### 1 Press DISPLAY in stop mode.

The Control Menu appears.

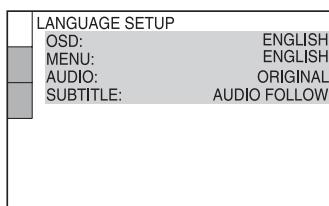
### 2 Press **↑** or **↓** repeatedly to select "SETUP", then press ENTER.

The options for "SETUP" appear.



### 3 Press **↑** or **↓** repeatedly to select "CUSTOM", then press ENTER.

The Setup Display appears.

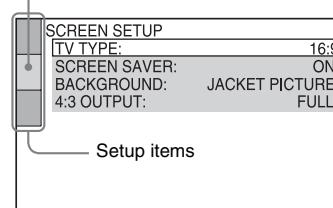


### 4 Press **↑** or **↓** repeatedly to select the setup item from the displayed list, then press ENTER.

The setup item is selected.

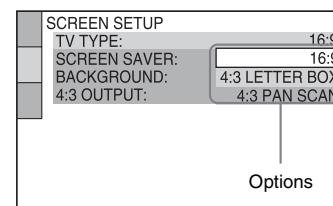
Example: "SCREEN SETUP"

#### Selected item



### 5 Press **↑** or **↓** repeatedly to select an item, then press ENTER.

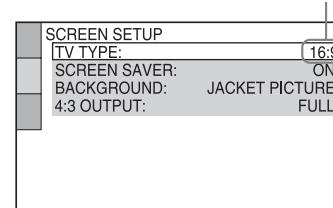
The options for the selected item appear.  
Example: "TV TYPE"



### 6 Press **↑** or **↓** repeatedly to select a setting, then press ENTER.

The setting is selected and setup is complete.

#### Selected setting



#### Tip

You can reset all the DVD settings except for Parental Control by performing the operations described under "To return the DVD setup to the default settings\*", perform reset as follows:" (page 62).

\* Except for parental control setting

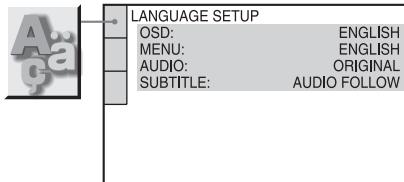
# Setting the display or sound track language

## — LANGUAGE SETUP —

“LANGUAGE SETUP” allows you to set various languages for the on-screen display or sound track.

### Select “LANGUAGE SETUP” in the Setup Display.

To use the Setup Display, see “Using the Setup Display” (page 32).



#### ■ OSD (on-screen display)

Switches the display language on the screen. Select the language from the displayed list.

#### ■ MENU (DVD VIDEO only)

You can select the desired language for the disc’s menu.

#### ■ AUDIO (DVD VIDEO only)

Switches the language of the sound track. When you select “ORIGINAL”, the language given priority in the disc is selected.

#### ■ SUBTITLE (DVD VIDEO only)

Switches the language of the subtitle recorded on the DVD VIDEO.

When you select “AUDIO FOLLOW”, the language for the subtitles changes according to the language you selected for the sound track.

#### Note

When you select a language in “MENU”, “AUDIO” or “SUBTITLE” that is not recorded on the DVD VIDEO, one of the recorded languages will be automatically selected (depending on the disc, the language may not be selected automatically).

#### Tip

If you select “OTHERS →” in “MENU”, “AUDIO” and “SUBTITLE”, select and enter a language code from “Language code list” (page 67) using the number buttons.

# Settings for the display

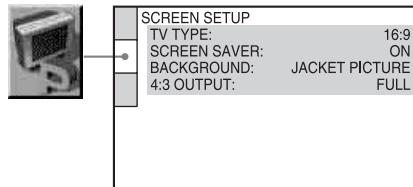
## — SCREEN SETUP —

Select settings according to the TV to be connected.

European model is used for illustration purposes.

### Select “SCREEN SETUP” in the Setup Display.

To use the Setup Display, see “Using the Setup Display” (page 32).



#### ■ TV TYPE

Selects the aspect ratio of the connected TV. The default setting varies, depending on the country model.

16:9      Select this when you connect a wide-screen TV or a TV with a wide mode function.

4:3 LETTER BOX      Select this when you connect a 4:3 screen TV. This setting displays a wide picture with bands on the upper and lower portions of the screen.

4:3 PAN SCAN      Select this when you connect a 4:3 screen TV. This setting automatically displays the wide picture on the entire screen and cuts off the portions that do not fit.

- 16:9



- 4:3 LETTER BOX



- 4:3 PAN SCAN



*continued*

## Note

Depending on the DVD, “4:3 LETTER BOX” may be selected automatically instead of “4:3 PAN SCAN” or vice versa.

## ■ COLOR SYSTEM (Asian and Middle Eastern models only)

Select the color system when you play a VIDEO CD.

The default setting is underlined.

<u>AUTO</u>	Outputs the video signal in the system of the disc, either PAL or NTSC. If your TV uses a DUAL system, select “AUTO”.
PAL	Changes the video signal of an NTSC disc and outputs it in the PAL system.
NTSC	Changes the video signal of a PAL disc and outputs it in the NTSC system.

## Notes

- You cannot change the color system of the disc itself.
- On Asian and Middle Eastern models, you can change the color system of this unit according to the connected TV.

## ■ SCREEN SAVER

Turns on and off the screen saver. If you turn on the TV screen saver, the screen saver image appears when you leave the system in pause or stop mode for 15 minutes, or when you play back a CD, Super Audio CD or DATA CD (MP3 audio tracks) for more than 15 minutes. The screen saver will help prevent your display device from becoming damaged (ghosting).

Press ▷ to turn off the screen saver.

The default setting is underlined.

<u>ON</u>	Turns on the screen saver.
OFF	Turns off the screen saver.

## ■ BACKGROUND

Selects the background color or picture on the TV screen in stop mode or while playing a CD, Super Audio CD or DATA CD (MP3 audio tracks).

The default setting is underlined.

<u>JACKET</u>	The jacket picture (still picture) appears in the background, but only when the jacket picture is already recorded on the disc (CD-EXTRA, etc.). If the disc does not contain a jacket picture, the “GRAPHICS” picture appears.
<u>PICTURE</u>	
<u>GRAPHICS</u>	A preset picture stored in the system appears.
<u>BLUE</u>	The background color is blue.
<u>BLACK</u>	The background color is black.

## ■ 4:3 OUTPUT

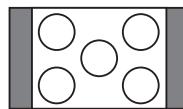
This setting is effective only when:

- you set “TV TYPE” in “SCREEN SETUP” to “16:9” (page 33).
- the type of signal output from the system is set to “PROGRESSIVE AUTO” or “PROGRESSIVE VIDEO” (page 35).

Adjust this to watch 4:3 aspect ratio progressive signals. If you can change the aspect ratio on your progressive format (525p/625p) compatible TV, change the setting on your TV, not the system.

The default setting is underlined.

<u>FULL</u>	Select this when you can change the aspect ratio on your TV.
<u>NORMAL</u>	Select this when you cannot change the aspect ratio on your TV. Shows a 16:9 aspect ratio signal with black bands on left and right sides of the image.



16:9 aspect ratio TV

## To change the type of signal output from the system

### — PROGRESSIVE —

Progressive is the method for displaying TV images which reduces flickering, and sharpens the image. To display using this method, you need to connect to a TV that accepts progressive signals.

**1** Press FUNCTION + or – repeatedly (or DVD on the unit) to switch the function to DVD.

**2** Press PROGRESSIVE on the unit.

Each time you press PROGRESSIVE on the unit, the display changes as follows:

PROGRESSIVE AUTO\* →

PROGRESSIVE VIDEO\* →

NORMAL (INTERLACE)

\* “P AUTO” or “P VIDEO” appears in the front panel display when the system outputs progressive signals.

### ■ PROGRESSIVE AUTO

Select this setting when your TV accepts progressive signals and the TV is connected to the COMPONENT VIDEO OUT jacks.

Normally select this setting under the above condition. This setting automatically detects the software type, and selects the appropriate conversion method.

Note that the picture will not be clear or no picture will appear if you select these settings when either of the above conditions is not met.

### ■ PROGRESSIVE VIDEO

Select this setting when your TV accepts progressive signals and the TV is connected to the COMPONENT VIDEO OUT jacks and you want to fix the conversion method to

PROGRESSIVE VIDEO for video-based software.

Select this setting if the image is not clear when you select “PROGRESSIVE AUTO”.

Note that the picture will not be clear or no picture will appear if you select these settings when either of the above conditions is not met.

### ■ NORMAL (INTERLACE)

Select this setting when your TV does not accept progressive signals or your TV is connected to the VIDEO OUT jack.

## About DVD software types and the conversion method

DVD software can be divided into 2 types: film-based software and video-based software.

Video-based software is derived from TV, such as dramas and sit-coms, and displays images at 30 frames/60 fields per second. Film-based software is derived from film and displays images at 24 frames per second. Some DVD software contains both video and film.

In order for these images to appear natural on your screen when output in progressive format, the progressive signals need to be converted to match the type of DVD software that you are watching.

### Note

When you play video-based software in progressive signal format, sections of some types of images may appear unnatural due to the conversion process when output through the COMPONENT VIDEO OUT jacks. Even though you set to “PROGRESSIVE AUTO” or “PROGRESSIVE VIDEO”, images from the VIDEO OUT jack are unaffected as they are output in the interlace format.

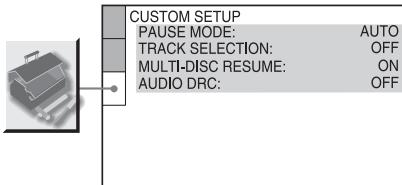
# Custom settings

## — CUSTOM SETUP —

Use “CUSTOM SETUP” to set up playback related and other settings.

### Select “CUSTOM SETUP” in the Setup Display.

To use the Setup Display, see “Using the Setup Display” (page 32).



### ■ PAUSE MODE (DVD VIDEO/DVD-RW only)

Selects the picture in pause mode.

The default setting is underlined.

AUTO	The picture, including subjects that move dynamically, is output with no jitter. Normally select this position.
FRAME	The picture, including subjects that do not move dynamically, is output in high resolution.

### ■ TRACK SELECTION (DVD VIDEO only)

Gives the priority to the sound track which contains the highest number of channels when you play a DVD VIDEO on which multiple audio formats (PCM, DTS, MPEG audio, or Dolby Digital format) are recorded.

The default setting is underlined.

OFF	No priority given.
AUTO	Priority given.

#### Notes

- When you set the item to “AUTO”, the language may change. The “TRACK SELECTION” setting has higher priority than the “AUDIO” settings in “LANGUAGE SETUP” (page 33). (Depending on the disc, this function may not work.)
- If PCM, DTS, Dolby Digital sound, and MPEG audio tracks have the same number of channels, the system selects PCM, DTS, Dolby Digital sound, and MPEG audio tracks in this order.

### ■ MULTI-DISC RESUME (DVD VIDEO/VIDEO CD only)

Switches the Multi-disc Resume setting on or off. Resume playback point can be stored in memory for up to 40 different DVD VIDEO/VIDEO CD discs (page 15).

The default setting is underlined.

ON	Stores the resume settings in memory for up to 40 discs.
OFF	Does not store the resume settings in memory. Playback restarts at the resume point only for the current disc in the system.

### ■ AUDIO DRC (Dynamic Range Compression) (DVD VIDEO/DVD-RW only)

Narrows the dynamic range of the sound track. Useful for watching movies at low volume late at night.

The default setting is underlined.

OFF	No compression of dynamic range.
STANDARD	Reproduces the sound track with the kind of dynamic range that the recording engineer intended.
MAX	Compresses dynamic range at the maximum.

#### Note

“AUDIO DRC” only applies to Dolby Digital sources.

# Restricting disc playback

## — CUSTOM PARENTAL CONTROL / PARENTAL CONTROL



## Preventing playback of specific discs

### — CUSTOM PARENTAL CONTROL

You can set the playback restrictions so that the system will not play inappropriate discs. You can set the same Custom Parental Control password for up to 40 discs. When you set the 41st disc, the playback restriction for the first disc is canceled.

#### 1 Load the disc you want to lock.

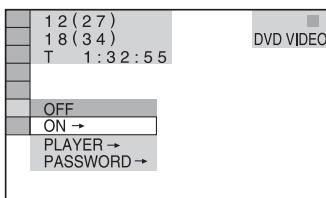
If the disc is playing, press ■ to stop play.

#### 2 Press □ DISPLAY in stop mode.

The Control Menu appears.

#### 3 Press ↑ or ↓ repeatedly to select “PARENTAL CONTROL”, then press ENTER.

The options for “PARENTAL CONTROL” appear.



**4 Press ↑ or ↓ repeatedly to select “ON→”, then press ENTER.**

#### ■ If you have not entered a password

The display for registering a new password appears.

### PARENTAL CONTROL

Enter a new 4-digit password,  
then press **ENTER**.



Enter a 4-digit password using the number buttons, then press ENTER.

The display for confirming the password appears.

#### ■ When you have already registered a password

The display for entering the password appears.

### PARENTAL CONTROL

Enter password, then press **ENTER**.



#### 5 Enter or re-enter your 4-digit password using the number buttons, then press ENTER.

“Custom parental control is set.” appears and the screen returns to the Control Menu.

#### If you make a mistake entering your password

Press ← repeatedly to select the wrong number before you press ENTER and input the correct number.

## To turn off the Control Menu

Press □ DISPLAY repeatedly until the Control Menu disappears.

*continued*

## To turn off the Custom Parental Control function

- 1 In step 4, select “OFF→”, then press ENTER.
- 2 Enter your 4-digit password using the number buttons, then press ENTER.

## To change the password

- 1 In step 4, select “PASSWORD→”, then press ENTER.  
The display for entering the password appears.
- 2 Enter your 4-digit password using the number buttons, then press ENTER.
- 3 Enter a new 4-digit password using the number buttons, then press ENTER.
- 4 To confirm your password, re-enter it using the number buttons, then press ENTER.

## To play a disc for which Custom Parental Control is set

- 1 Load the disc for which Custom Parental Control is set.  
The “CUSTOM PARENTAL CONTROL” display appears.
- 2 Enter your 4-digit password using the number buttons, then press ENTER.  
The system is ready for playback.

### Tip

If you forgot your password, enter the 6-digit number “199703” using the number buttons when the “CUSTOM PARENTAL CONTROL” display asks you for your password, then press ENTER. The display will ask you to enter a new 4-digit password.

## Limiting playback by children (DVD VIDEO only)

### — PARENTAL CONTROL

You can limit the playback of some DVD VIDEOS according to a predetermined level such as the age of the users. The same password is used for both Custom Parental Control and Parental Control.

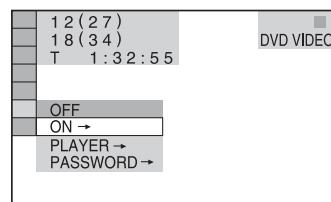
When a limited scene is played back, that scene is cut or replaced with a preset other scene.

- 1 Press DISPLAY in stop mode.

The Control Menu appears.

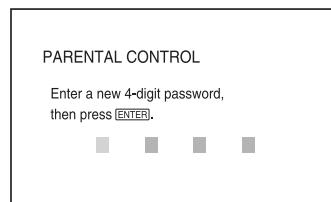
- 2 Press or repeatedly to select “PARENTAL CONTROL”, then press ENTER.

The options for “PARENTAL CONTROL” appear.



- 3 Press or repeatedly to select “PLAYER→”, then press ENTER.

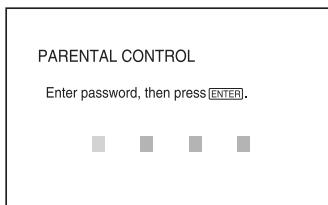
- If you have not entered a password  
The display for registering a new password appears.



Enter a 4-digit password using the number buttons, then press ENTER.  
The display for confirming the password appears.

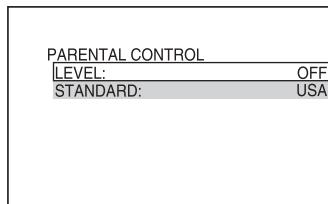
**■ When you have already registered a password**

The display for entering the password appears.



**4 Enter or re-enter your 4-digit password using the number buttons, then press ENTER.**

The display for setting the playback limitation level and changing the password appears.

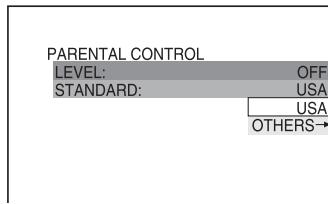


**If you make a mistake entering your password**

Press **←** repeatedly to select the wrong number before you press **ENTER** and input the correct number.

**5 Press **↑** or **↓** repeatedly to select “STANDARD”, then press ENTER.**

The options for “STANDARD” appear.



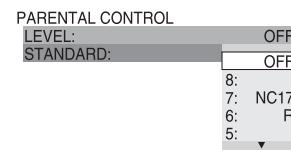
**6 Press **↑** or **↓** repeatedly to select a geographic area as the playback limitation level, then press ENTER.**

The area is selected.

When you select “OTHERS→”, select and enter the standard code in the table on page 40 using the number buttons.

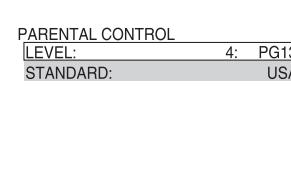
**7 Press **↑** or **↓** repeatedly to select “LEVEL”, then press ENTER.**

The options for “LEVEL” appear.



**8 Press **↑** or **↓** repeatedly to select the level you want, then press ENTER.**

The Parental Control setting is completed.



The lower the value, the more strict the limitation.

**To turn off the Parental Control function**

Set “LEVEL” to “OFF” in step 8.

**To change the password**

**1 In step 3, select “PASSWORD→”, then press ENTER.**

The display for entering the password appears.

**2 Follow step 3 to enter a new password.**

## To play a disc for which Parental Control is set

- 1 Load the disc for which Parental Control is set.
- 2 Press ▷. The “PARENTAL CONTROL” display appears.
- 3 Enter your 4-digit password using the number buttons, then press ENTER. Playback starts.

### Notes

- The Control Menu display shows different items depending on the disc type.
- When you play DVDs which do not have the Parental Control function, playback cannot be limited on this system.
- Depending on the DVD, you may be asked to change the parental control level while playing the disc. In this case, enter your password, then change the level. If the Resume Play mode is canceled, the level returns to the original level.

### Tip

If you forgot your password, remove the disc and repeat steps 1 to 3 of “Limiting playback by children (DVD VIDEO only)” (page 38). When you are asked to enter your password, enter “199703” using the number buttons, then press ENTER. The display will ask you to enter a new 4-digit password. After you enter a new 4-digit password, replace the disc in the system and press ▷. When the “PARENTAL CONTROL” display appears, enter your new password.

## Area code

Standard	Code number
Argentina	2044
Australia	2047
Austria	2046
Belgium	2057
Brazil	2070
Canada	2079
Chile	2090
China	2092
Denmark	2115
Finland	2165
France	2174
Germany	2109
India	2248
Indonesia	2238
Italy	2254
Japan	2276
Korea	2304
Malaysia	2363
Mexico	2362
Netherlands	2376
New Zealand	2390
Norway	2379
Pakistan	2427
Philippines	2424
Portugal	2436
Russia	2489
Singapore	2501
Spain	2149
Sweden	2499
Switzerland	2086
Thailand	2528
United Kingdom	2184

## Changing the angles



If various angles (multi-angles) for a scene are recorded on a DVD VIDEO, you can change the viewing angle.

For example, while playing a scene of a train in motion, you can display the view from either the front of the train, the left window of the train, or from the right window without having the train's movement interrupted.

### Press ANGLE during play.

Each time you press ANGLE, the angle changes.

#### Note

Depending on the DVD VIDEO, you may not be able to change the angle even if multi-angles are recorded on the DVD VIDEO.

## Displaying the subtitles



With DVDs on which multilingual subtitles are recorded, you can change the subtitle language while playing a DVD, or turn the subtitles on or off whenever you want.

For example, you can select the language you want to master and turn the subtitles on for better understanding.

### Press SUBTITLE during play.

Each time you press SUBTITLE, the subtitle language changes.

#### Note

Depending on the DVD VIDEO, you may not be able to change the subtitles even if multilingual subtitles are recorded on the DVD VIDEO. You also may not be able to turn the subtitles off.

## Tuner

# Presetting radio stations

You can preset up to 20 FM stations and 10 AM stations. You can then tune in any of those stations simply by selecting the corresponding preset number.

## Automatic tuning preset

You can automatically tune in all of the stations that can be received in your area and then store the radio frequency of the desired stations.

- 1 Press FUNCTION + or – repeatedly (or press TUNER FM or TUNER AM on the unit) to select “TUNER FM” or “TUNER AM”.**
- 2 Press and hold TUNING + or – until “AUTO” appears.**

The frequency changes as the system scans for a station. Scanning stops automatically when a station is tuned in. At that time, “TUNED” and “STEREO” (for an FM stereo program) appear.

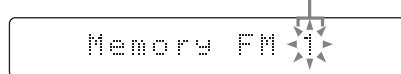


**If “TUNED” does not appear and the scanning does not stop**

Set the frequency of the desired radio station as described in “Manual tuning preset”.

- 3 Press MENU.**  
“Memory?” appears.
- 4 Press ENTER.**  
A preset number flashes. Perform steps 5 and 6 while the preset number flashes.

Preset number



- 5 Press  $\uparrow$  or  $\downarrow$  repeatedly to select the desired preset number.**
- 6 Press ENTER.**  
“Complete!” appears.
- 7 Repeat steps 1 through 6 to store other stations.**

## Manual tuning preset

You can manually tune in and store the radio frequency of the desired stations.

- 1 Press FUNCTION + or – repeatedly (or press TUNER FM or TUNER AM on the unit) to select “TUNER FM” or “TUNER AM”.**
- 2 Press TUNING + or – repeatedly to tune in the desired station.**
- 3 Press MENU.**  
“Memory?” appears.
- 4 Press ENTER.**  
A preset number flashes. Perform steps 5 and 6 while the preset number flashes.
- 5 Press  $\uparrow$  or  $\downarrow$  repeatedly to select the desired preset number.**
- 6 Press ENTER.**  
“Complete!” appears.
- 7 Repeat steps 1 through 6 to store other stations.**

## Other operations

To	Do this
Tune in a station with a weak signal	Follow the procedure described in “Manual tuning preset”.
Set another station to the existing preset number	Start over from step 1. After step 4, press $\uparrow$ or $\downarrow$ repeatedly to select the preset number you want to store the other station.
Cancel presetting	Press MENU in step 3 or 4.

## To change the AM tuning interval (except for European and Russian models)

The AM tuning interval is factory-preset to 9 kHz (or 10 kHz for some areas). To change the AM tuning interval, tune in any AM station first, then turn off the system. While holding ■ on the unit, press I/O on the unit. When you change the interval, all the AM preset stations are erased. To reset the interval, repeat the same procedure.

### Tips

- The preset stations are retained for about half a day even if you disconnect the power cord or if a power failure occurs.
- To improve broadcast reception, adjust the supplied antennas, or connect a commercially available external antenna.

## Listening to the radio

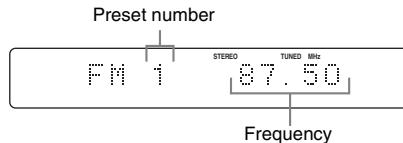
You can listen to a radio station either by selecting a preset station, or by manually tuning in the station.

### Listening to a preset station

#### — Preset Tuning

Preset radio stations in the tuner's memory first (see "Presetting radio stations" on page 42).

- 1 Press **FUNCTION + or –** repeatedly (or press **TUNER FM** or **TUNER AM** on the unit) to select "TUNER FM" or "TUNER AM".
- 2 Press **PRESET + or –** repeatedly to select the desired preset station.



#### Tip

You can also select the desired preset station by pressing the number buttons and **ENTER** in step 2.

## Listening to non-preset radio station

### — Manual Tuning

- 1 Press FUNCTION + or – repeatedly (or press TUNER FM or TUNER AM on the unit) to select “TUNER FM” or “TUNER AM”.
- 2 Press TUNING + or – repeatedly to tune in the desired station.

#### Note

The OSD does not appear on the TV screen except for DVD function.

#### Tips

- When an FM stereo program has static noise, press FM MODE repeatedly until “MONO” appears. There will be no stereo effect, but the reception will improve.
- Press and hold TUNING + or – in step 2 above. The frequency indication changes and scanning stops when the system tunes in a station (Automatic Tuning).

## Using the Radio Data System (RDS)

(European model only)

## What is the Radio Data System?

Radio Data System (RDS) is a broadcasting service that allows radio stations to send additional information along with the regular program signal. This tuner offers convenient RDS features like station name. RDS is available only on FM stations.\*

#### Note

RDS may not work properly if the station you are tuned in is not transmitting the RDS signal properly or if the signal is weak.

\* Not all FM stations provide RDS service, nor do they provide the same types of services. If you are not familiar with the RDS system, check with your local radio stations for details on RDS services in your area.

## Receiving RDS broadcasts

**Simply select a station from the FM band.**

When you tune in a station that provides RDS services, the station name appears in the display.

### To check the RDS information

Each time you press TIME/TEXT, the display changes as follows:

Station name<sup>1)</sup> ↔ Preset number<sup>2)</sup> and frequency

<sup>1)</sup> If the RDS broadcast is not properly received, the station name may not appear in the display.

<sup>2)</sup> Preset number is displayed only if you preset radio stations (page 42).

## Sound Adjustment

### Adjusting the sound

#### Generating a more dynamic sound (Dynamic Sound Generator X-tra)

##### Press DSGX on the unit.

Each time you press the button, the display changes as follows:

DSGX ON ↔ DSGX OFF

#### Adjusting the bass and treble

You can adjust the bass and treble to enjoy more powerful sound.

Use buttons on the unit for the operation.

- 1 Press BASS/TREBLE repeatedly to select “BASS” or “TREBLE”.**
- 2 Press  $\blacktriangleleft\blacktriangleright$  repeatedly to adjust the level.**

#### To exit the bass and treble settings

If you do not perform any operations for 4 seconds, the display automatically returns to the original display.

## Selecting the surround effect

Press SOUND FIELD to select the effect you want.

Each time you press the button, the display changes cyclically as follows:

##### ■ When the headphones are not connected

2CH STEREO<sup>1)</sup> → 2CH SURR → VIRTUAL A<sup>2)</sup> → VIRTUAL B<sup>2)</sup>

##### ■ When the headphones are connected

HP 2CH<sup>1)</sup> → HP SURR → HP VIRTUAL<sup>2)</sup>

<sup>1)</sup> When playing a Super Audio CD, the sound field is fixed to “2CH STEREO” or “HP 2CH”.

<sup>2)</sup> These sound fields can be selected during DVD function except when karaoke mode is selected.

- HP 2CH: This mode outputs the sound from headphone L/R. Standard 2 channel (stereo) sources completely bypass the sound field processing. Multi channel surround formats are downmixed to two channels.
  - HP SURR: This mode outputs sound with reverberations.
  - HP VIRTUAL: This mode outputs the sound as surround from headphone L/R.
  - VIRTUAL A: Creates 3 sets of virtual surround speakers from the sound of the actual front speakers (L/R).
  - VIRTUAL B: Creates 1 set of virtual surround speakers from the sound of the front speakers (L/R) without using actual surround speakers. This mode is effective when the distance between the front L and R speakers is short.
  - 2CH STEREO: This mode outputs the sound from the left and right speakers. Standard 2 channel (stereo) sources completely bypass the sound field processing. Multi channel surround formats are downmixed to two channels.
- This allows you to play any source using the left and right speakers.
- 2CH SURR: This mode outputs sound with reverberations.

*continued*

### Note

For some discs, the surround effect may not be as much as expected.

### Tips

- “VIRTUAL A”, “VIRTUAL B” and “HP VIRTUAL” are effective only when a multi channel source is played.
- As the sound field for DVD function differs from that of other functions, you might find different sound field when you switch to other functions from DVD function.

## Singing along: Karaoke

You can enjoy karaoke (singing along with a disc) by setting the system to karaoke mode.

### Setting the system to karaoke mode

#### 1 Press DISPLAY.

The Control Menu appears.

#### 2 Press KARAOKE MODE.

Karaoke mode is activated and “” appears at the upper right of the TV screen.

#### 3 Press AUDIO repeatedly to select the audio setting.

For details on the audio setting, see “Changing the sound” (page 30).

### To cancel karaoke mode

Press KARAOKE MODE again.

### Notes

- You can activate karaoke mode in DVD function only.
- You cannot activate karaoke mode when a Super Audio CD is played back.
- You cannot activate karaoke mode when the headphones are connected to the system.
- For DVDs or Super VCDs, press AUDIO repeatedly to select the audio setting (page 30).  
For CDs or VIDEO CDs, the audio setting automatically switches to “I/L” and the singer’s voice turns down after step 2. If the singer’s voice does not turn down, press AUDIO repeatedly to select the audio setting (page 30).

## Playing karaoke with any stereo disc

### — Karaoke Pon

You can enjoy karaoke with a stereo-recorded disc, even if it is a non-karaoke disc, by reducing the sound of the vocals.

**Press KARAOKE PON in karaoke mode.**

### To cancel Karaoke Pon mode

Press KARAOKE PON again.

#### Notes

- You can set Karaoke Pon only when the karaoke mode is on.
- This function may not work well in the following cases:
  - Only a few instruments are playing
  - A duet is playing
  - The vocals on the disc deviate from the center
  - Monaural-recorded discs (the accompaniment is also reduced)
  - Multiplex
- During Karaoke Pon mode, the stereo effect is reduced.
- The instrumental sound may be reduced as well as the singer's voice when the sound is recorded in monaural.

#### Tips

- You can turn Karaoke Pon mode on and off by using "KARAOKE PON" in the Control Menu display (page 68).
- Karaoke Pon mode is automatically canceled when:
  - you turn off the system.
  - you change the function.
  - you cancel karaoke mode.
  - you remove the disc.

## Changing the Key

### — Key Control

You can change the key to suit your vocal range.

**Press KEY CONTROL # or b to suit your vocal range in karaoke mode.**

You can adjust the key higher or lower in 15 steps (b7 – #7).

#### Notes

- You can change the key only when the karaoke mode is on.
- Depending on the discs, you may not be able to change the key.

#### Tips

- The key automatically returns to the original key when:
  - you turn off the karaoke mode.
  - you turn off the system.
  - you remove the disc.
  - the title or track is changed.
- You can change the key using "KEY CONTROL" in the Control Menu display (page 68).

## Timer

# Falling asleep to music

### — Sleep Timer

You can set the system to turn off after a certain time, so that you can fall asleep to music.

#### Press SLEEP.

Each time you press the button, the minute display (the turn-off time) changes cyclically as follows:

90min → 80min → 70min → ... → 10min → OFF

### Other operations

To	Press
Check the remaining time	SLEEP once.
Change the time to turn off	SLEEP repeatedly to select the time you want.
Cancel the Sleep Timer function	SLEEP repeatedly until "SLEEP OFF" appears.

#### Tip

You can use the Sleep Timer, even if you have not set the clock.

# Waking up to music

### — Play Timer

You can wake up to music at a preset time. Make sure you have set the clock (see "Setting the clock" on page 11).

Use buttons on the remote for the operation.

#### 1 Prepare the sound source you want to play.

- DVD: Load a disc.
- Tuner: Tune in the preset radio station (see "Listening to the radio" on page 43).

#### 2 Press VOLUME + or - to adjust the volume.

#### 3 Press TIMER MENU.

#### 4 Press $\uparrow$ or $\downarrow$ repeatedly to select "PLAY SET?", then press ENTER.

"ON" appears and the hour indication flashes.

#### 5 Set the time to start playing.

Press  $\uparrow$  or  $\downarrow$  repeatedly to set the hour, then press  $\rightarrow$ .

The minute indication flashes.

Press  $\uparrow$  or  $\downarrow$  repeatedly to set the minute, then press ENTER.

#### 6 Set the time to stop playing following the same procedure as step 5.

#### 7 Press $\uparrow$ or $\downarrow$ repeatedly until the desired sound source appears.

Each time you press the button, the display changes cyclically as follows:

TUNER  $\leftrightarrow$  DVD PLAY

#### 8 Press ENTER.

The type of timer ("PLAY TIMER"), the start time, the stop time, and the sound source appear in turn, before the original display returns.

#### 9 Press I/ $\ominus$ to turn off the system.

## Other operations

To	Do this
Check the setting	<ol style="list-style-type: none"><li>1 Press TIMER MENU.</li><li>2 Press <b>↑</b> or <b>↓</b> repeatedly until “TIMER SEL?” appears, then press ENTER.</li><li>3 Press <b>↑</b> or <b>↓</b> repeatedly until “PLAY SELECT?” appears, then press ENTER.</li></ol>
Change the setting	Start over from step 1.
Cancel the timer	<ol style="list-style-type: none"><li>1 Press TIMER MENU.</li><li>2 Press <b>↑</b> or <b>↓</b> repeatedly until “TIMER SEL?” appears, then press ENTER.</li><li>3 Press <b>↑</b> or <b>↓</b> repeatedly until “TIMER OFF?” appears, then press ENTER.</li></ol>

### Notes

- If you use the Play Timer and the Sleep Timer at the same time, the Sleep Timer has priority.
- The system turns on 30 seconds before the preset time. Do not operate the system from the time the system turns on until the play starts.
- The Play Timer will not be activated when the following occurs 30 seconds before the preset time.
  - The system is turned on.
  - “STANDBY” is blinking in the display.
- You cannot use the optional component connected to VIDEO/SAT IN L/R jacks as the sound source for Play Timer.

## Display

### Turning off the display

#### — Power Saving Mode

The demonstration display (display window and buttons lighting and flashing even when the system power is off) and the clock display can be turned off to minimize the amount of power consumed during standby (Power Saving Mode).

**Press DISPLAY repeatedly while the system is off until the demonstration display or the clock display disappears.**

#### To cancel Power Saving Mode

Press DISPLAY while the system is off. Each time you press the button, the display switches cyclically as follows:

Demonstration display → Clock display\* → No display (Power Saving Mode)

\* “—:—” appears if you have not set the clock.

#### Tips

- The timer continues to operate in Power Saving Mode.
- **I/O** indicator lights up even in Power Saving Mode.

### Adjusting the brightness of the display

**Press DIMMER on the unit repeatedly to turn the display on or off while the system is on.**

Each time you press the button, the display changes as follows:

DIMMER OFF ↔ DIMMER ON

# **Viewing information about the disc in the display**

You can check the playing time and remaining time of the current track or that of the disc. When a DVD/CD-TEXT disc or a disc with MP3 audio tracks or JPEG image file is loaded, you can also check the information recorded on disc, such as the titles.

## **Checking the playing time, remaining time and titles (DVD/VIDEO CD/CD/Super Audio CD/MP3/JPEG)**

### **Press TIME/TEXT during Normal Play.**

Each time you press the button, the display changes cyclically as follows:

#### **■ When playing a DVD VIDEO/DVD-RW**

Elapsed playing time of the current title →  
Remaining time of the current title →  
Elapsed playing time of the current chapter →  
Remaining time of the current chapter →  
Disc name<sup>1)</sup> → Title and chapter number<sup>2)</sup>

#### **■ When playing a CD/Super Audio CD/VIDEO CD without PBC function**

Elapsed playing time of the current track →  
Remaining time of the current track →  
Elapsed playing time of the disc<sup>3)</sup> →  
Remaining time of the disc<sup>3)</sup> → Disc name<sup>1)</sup> →  
Track and index number<sup>2)4)5)</sup>

#### **■ When playing a VIDEO CD with PBC functions (Ver. 2.0)**

Elapsed playing time of the current scene<sup>5)</sup> →  
Disc name<sup>1)</sup> → Current scene number<sup>2)</sup>

#### **■ When playing an MP3**

Elapsed playing time of the current track →  
Track name<sup>1)</sup>

- 1) Only alphabet letters and numbers can be displayed. Other characters appear as “\*\*”. In addition, “NO TEXT” is displayed for discs without DVD/CD text and file name.
- 2) The display returns to the top image after 2 seconds.
- 3) These are not displayed during Shuffle Play or Program Play.
- 4) Super Audio CD/VIDEO CD without PBC function only
- 5) May not appear with still images.

### **Notes**

- If the disc does not contain text, the disc name or the track name is displayed “NO TEXT”.
- The system can only display the first level of the DVD/CD text, such as the Disc name or title.
- If an MP3 audio track name cannot be displayed, “\*\*” will appear in the display instead.
- Playing timer of MP3 audio tracks may not be displayed correctly.
- If you play a disc containing JPEG image files only, “JPEG” or “No Audio” appears in the display.
- If you play a disc containing MP3 audio tracks only, “No Image” appears in the display.

## **Checking the total playing time and titles (DVD/VIDEO CD/CD/Super Audio CD)**

### **Press TIME/TEXT in stop mode.**

Each time you press the button, the display changes cyclically as follows:

#### **■ When a DVD VIDEO/DVD-RW is in Normal Play mode**

Total title number of the disc → Disc name\*

#### **■ When a CD/Super Audio CD/VIDEO CD without PBC function is in Normal Play mode**

Total playing time of the disc → Disc name\*

#### **■ When a VIDEO CD with PBC functions (Ver. 2.0) is in Normal Play mode**

Total scene number of the disc → Disc name\*

\* Only alphabet letters and numbers can be displayed. Other characters appear as “\*\*”. In addition, “NO TEXT” is displayed for discs without DVD/CD text and file name.

## Notes

- Depending on the DVD, the disc information may not be displayed.
- Depending on the disc, some DVD/CD text information may not appear.
- With formats other than ISO9660 Level 1 and 2, folder names or file names may not be displayed correctly.
- Playing time of MP3 audio tracks may not be displayed correctly.
- If you play a disc containing JPEG image files only, “JPEG” or “No Audio” appears in the display.
- If you play a disc containing MP3 audio tracks only, “No Image” appears in the display.

## Tip

You can check the playing time of the disc using the Control Menu (see “Viewing information about the disc in the on-screen display” on page 51).

## Checking the clock display and sound effect

### Press DISPLAY.

Each time you press the button, the display changes cyclically as follows:

Disc information → Clock display (for a few seconds) → Bass level (for a few seconds) → Treble level (for a few seconds)

## Tip

You can check the effect status in any function.

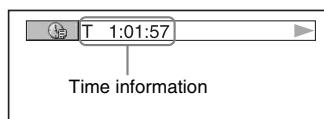
## Viewing information about the disc in the on-screen display

You can check the playing time and remaining time of the current title, chapter or track.

You can also check the DVD/CD/Super Audio CD text and file/album name recorded on the disc.

### 1 Press TIME/TEXT during play.

The following display appears.



### 2 Press TIME/TEXT repeatedly to change the time information.

The display and the kinds of time that you can change depend on the disc you are playing.

#### ■ When playing a DVD VIDEO/DVD-RW

- T \*\*\*:\*\*\*:\*\*\*  
Elapsed playing time of the current title
- T-\*\*\*:\*\*\*:\*\*\*  
Remaining time of the current title
- C \*\*\*:\*\*\*:\*\*\*  
Elapsed playing time of the current chapter
- C-\*\*\*:\*\*\*:\*\*\*  
Remaining time of the current chapter

#### ■ When playing a VIDEO CD with PBC functions (Ver. 2.0)

- \*\*\*:\*\*\*  
Elapsed playing time of the current scene

#### ■ When playing a CD/Super Audio CD/VIDEO CD without PBC function

- T \*\*\*:\*\*\*  
Elapsed playing time of the current track
- T-\*\*\*:\*\*\*  
Remaining time of the current track
- D \*\*\*:\*\*\*  
Elapsed playing time of the current disc
- D-\*\*\*:\*\*\*  
Remaining time of the current disc

## ■ When playing a DATA CD (MP3 audio tracks)

- T \*\*:\*\*  
Elapsed playing time of the current track

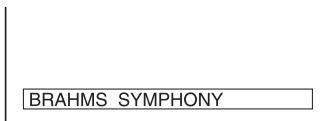
### Notes

- Only alphabet letters and numbers can be displayed. Other characters appear as “\*\*”. In addition, “NO TEXT” is displayed for discs without DVD/CD/Super Audio CD text and file name.
- Depending on the disc being played, the system can only display a limited number of characters. Also, depending on the disc, all text characters are not displayed.
- With formats other than ISO9660 Level 1 and 2, folder names or file names may not be displayed correctly.

## To check DVD/CD/Super Audio CD text

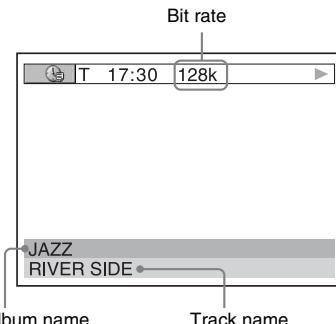
Press TIME/TEXT repeatedly in step 2 to display text recorded on the DVD/CD/Super Audio CD.

The DVD/CD/Super Audio CD text appears only when text is recorded in the disc. You cannot change the text. If the disc does not contain text, “NO TEXT” appears.



## To check DATA CD (MP3 audio track) text

Press TIME/TEXT while playing MP3 audio tracks on a DATA CD. The name of the album/track/file, and the audio bit rate (the amount of data per second of the current audio) appear on your TV screen.



### Notes

- Only alphabet letters and numbers can be displayed. Other characters appear as “\*\*”. In addition, “NO TEXT” is displayed for discs without DVD/CD/Super Audio CD text and file name.
- ID3 tag information cannot be displayed with this system.

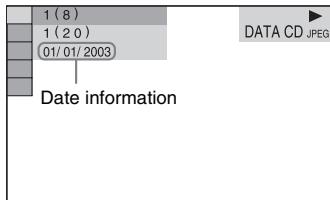
## Checking the date information

### JPEG

You can check the date information during play when the Exif\* tag is recorded in the JPEG image data.

**Press  DISPLAY twice during play.**

The Control Menu for JPEG appears.



\* "Exchangeable Image File Format" is a digital camera image format defined by the Japan Electronics and Information Technology Industries Association (JEITA).

### Notes

- If there is no date information or data is damaged on the disc, the system cannot display the date information.
- Date information differs depending on the area.

## Viewing the tuner information in the display

**Press DISPLAY while listening to the radio.**

Each time you press the button, the display changes cyclically as follows:

Station name<sup>1)</sup> → Preset number<sup>2)</sup> and frequency → Clock display (for a few seconds) → Bass level (for a few seconds) → Treble level (for a few seconds)

<sup>1)</sup> European model only

<sup>2)</sup> Preset number is displayed only if you preset radio stations (page 42).

## Optional Components

# Controlling the TV with the remote

You can use the following buttons on the remote to operate a Sony TV.

To	Press
Turn the TV on or off	TV I/  while holding down the TV button
Switch the TV's input source between the TV and other input sources	TV/VIDEO while holding down the TV button
Change the TV channels	TV CH +/- or the number buttons while holding down the TV button
Adjust the volume of the TV speaker(s)	TV VOL +/- while holding down the TV button

## Using the THEATRE SYNC function

THEATRE SYNC allows you to turn on your SONY TV and this system, change the system mode to "DVD", and then switch the TV's input source you set with one button push.  
Use the remote for the operation.

- 1 Press and hold TV/VIDEO while entering the code for the TV's input source connected to this system (see the table below) using the number buttons.**

TV's input source is selected.

Number	TV's input source
0	No input source (Default)
1	VIDEO1
2	VIDEO2
3	VIDEO3
4	VIDEO4
5	VIDEO5
6	VIDEO6
7	VIDEO7

Number	TV's input source
8	VIDEO8
9	COMPONENT 1 INPUT
CLEAR	COMPONENT 2 INPUT
ALBUM -	COMPONENT 3 INPUT
ALBUM +	COMPONENT 4 INPUT

- 2 Press and hold TV CH + while entering the code for transmit time (see the table below) using the number buttons.**

The transmit time from the remote is selected.

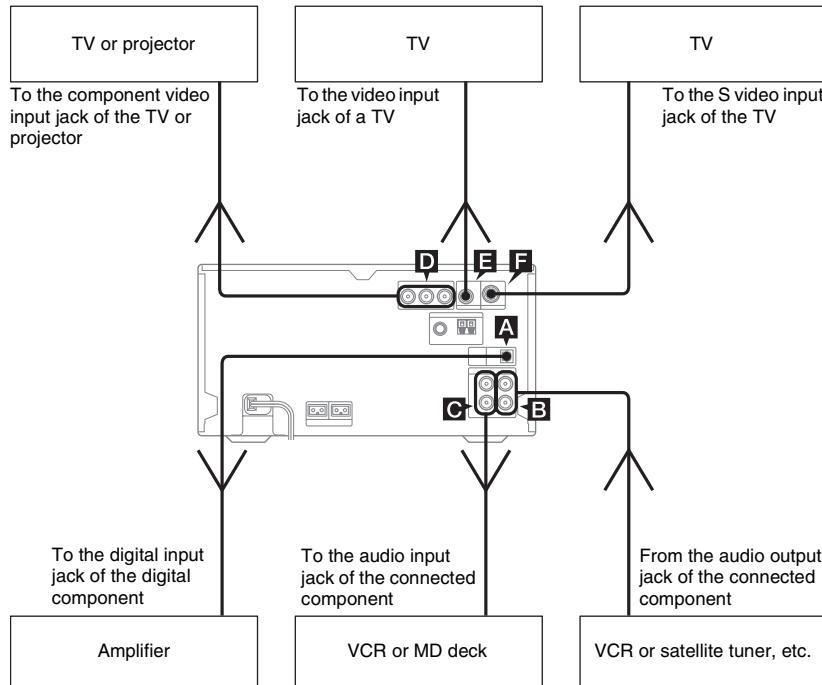
Number	Transmit time
1	0.5 (Default)
2	1
3	1.5
4	2
5	2.5
6	3
7	3.5
8	4

### Notes

- This function is only for SONY TV series, however, some TV products may also not work.
- If this function does not work, change the transmit time. The transmit time varies depending on the TV.
- If distance between the TV and this system is too far, this function may not work. Install the system near the TV.
- Keep the remote pointed in the direction of the TV and this system.

## Hooking up optional components

To enhance your system, you can connect optional components. Refer to the operating instructions provided with each component. European model is used for illustration purposes only.



### A DVD DIGITAL OUT jack

Use a digital optical cord (square, not supplied) to connect an amplifier with a digital optical input jack. Sound is then output when the system function is set to DVD. By connecting this system to the optical input jack of the optional amplifier equipped with Dolby Digital or DTS decoder, you can enjoy the 5.1 channel sound. If the jack is covered with a cap, remove it before use.

#### Notes

- If you press AUDIO, SOUND FIELD or the buttons related to karaoke mode, or if you connect or disconnect headphones, the sound cuts off for a moment.
- Digital audio cannot be output when playing a Super Audio CD.

### B VIDEO/SAT IN L/R jacks

Use audio cords (not supplied) to connect an optional analog component (VCR or satellite tuner, etc.) to these jacks. You can then listen to the sound from the component through this system.

### C VIDEO/SAT OUT L/R jacks

Use audio cords (not supplied) to connect an optional analog component (VCR or MD deck, etc.) to these jacks. You can then output audio to the component from this system.

#### Note

If you press AUDIO, SOUND FIELD or the buttons related to karaoke mode, or if you connect or disconnect headphones, the sound cuts off for a moment.

*continued*

## **D COMPONENT VIDEO OUT jacks**

Use a video cord (not supplied) to connect a TV. If your TV accept progressive format file signals, you must use this connection and set the “PROGRESSIVE” setting to “PROGRESSIVE AUTO” or “PROGRESSIVE VIDEO” (page 35).

## **E VIDEO OUT jack**

Use a video cable (supplied) to connect the video input of TV to this jack.

## **F S VIDEO OUT jack**

Use an S video cord (not supplied) to connect an optional TV to this jack. You can enjoy higher quality video images.

## **Listening to audio from a connected component**

Use buttons on the unit for the operation.

### **1 Connect audio cords.**

See “Hooking up optional components” on page 55.

### **2 Press VIDEO/SAT to switch the function to “VIDEO” or “SAT”.**

### **3 Start playing the connected component.**

#### **Notes**

- If you cannot select “SAT”, by pressing VIDEO/SAT, hold down VIDEO/SAT, then press **I/** while the power is on. The function will change from “VIDEO” to “SAT”, and “SAT” will appear in the display. To change back to “VIDEO”, repeat the same procedure.
- If the sound is distorted or too loud when “VIDEO” is selected or you want to switch back to “SAT”, repeat the operation described above to switch to “SAT”.

## Enjoying the 5.1 channel sound with the optional amplifier

### 1 Connect a digital optical cord.

See "Hooking up optional components" on page 55.

### 2 Connect 6 speakers to an AV amplifier equipped with a decoder.

For the speaker placement, refer to the operating instructions supplied with the connected amplifier.

### 3 Switch the output to 5.1 channel Dolby Digital sound or 5.1 channel DTS sound.

See "Changing the sound" on page 30.

#### Note

If you press AUDIO, SOUND FIELD or the buttons related to karaoke mode, or if you connect or disconnect headphones, the sound cuts off for a moment.

#### Tip

You cannot use the surround effect of this system.

## Recording on a connected component

### Making an analog recording

#### 1 Connect audio cords.

See "Hooking up optional components" on page 55.

#### 2 Start recording.

Refer to the operating instructions provided with the connected component.

### Making an analog recording from a VIDEO CD to a video tape

#### 1 Connect optional audio cords from the VIDEO/SAT OUT L/R (audio) jacks and the supplied video cable from the VIDEO OUT jack to your VCR.

#### 2 Start recording.

Refer to the operating instructions provided with the connected component.

#### Note

If the picture has disturbance or there is noise in the audio when a TV, a video deck and this system are all connected at the same time, disconnect one of them.

## Troubleshooting

# Problems and remedies

Should you encounter a problem with your system, do the following:

- 1 Make sure the power cord and speaker cords are correctly and firmly connected.
- 2 Find your problem in the troubleshooting checklist below and take the indicated corrective action.

If the problem persists after doing all of the above, consult your nearest Sony dealer.

### When the indicator flashes

Immediately unplug the power cord and check the following items.

- Are the + and – speaker cords short-circuited?
- Are you using the supplied speakers?
- Is anything blocking the ventilation holes on the rear of the system?

Check all the above items and fix any problems found. After  indicator stops flashing, reconnect the power cord and turn on the system. If the indicator still flashes, or if the cause of the problem cannot be found even after checking all the above items, consult your nearest Sony dealer.

## General

**The display starts flashing as soon as you plug in the power cord even though you have not turned on the system (see step 5 of “Hooking up the system” (page 8)).**

- Press DISPLAY while the system is off. The demonstration disappears.

### “— :— :—” appears in the display.

- A power interruption has occurred. Set the clock (page 11) and timer settings (page 48) again.

### The clock setting/radio presetting/timer is canceled.

- Redo the following:
  - “Setting the clock” (page 11)
  - “Presetting radio stations” (page 42)
  - “Falling asleep to music” (page 48) and “Waking up to music” (page 48)

### There is no sound.

- Press VOLUME + or turn VOLUME control on the unit clockwise.
- Make sure the headphones are not connected.
- Check the speaker connections (page 8).
- The system is in pause mode or in slow-motion play mode. Press ▶ to return to normal play mode.
- Fast forward or fast reverse is performed. Press ▶ to return to normal play mode.

### There is severe hum or noise.

- Move the system away from the source of noise.
- Connect the system to a different wall outlet.
- Install a noise filter (commercially available) to the power cord.

### The timer cannot be set.

- Set the clock again (page 11).

### The timer does not function.

- Check the timer setting and set the correct time (page 48).
- Cancel the Sleep Timer function (page 48).

### The remote does not function.

- Remove the obstacle.
- Move the remote closer to the system.
- Point the remote at the system’s sensor.
- Replace the batteries (R6/size AA).
- Locate the system away from the fluorescent light.

**There is acoustic feedback.**

- Reduce the volume.

**The color irregularity on a TV screen persists.**

- Turn off the TV set once, then turn it on after 15 to 30 minutes. If the color irregularity still persists, place the speakers farther away from the TV set.

**The sound from the connected source is distorted.**

- If "VIDEO" appears in the display when you press VIDEO/SAT on the unit, switch the display to "SAT" (see "Listening to audio from a connected component" on page 56).

**Speakers****Sound comes from one channel or unbalanced left and right volume.**

- Check the speaker connection and speaker placement.
- The source being played back is monaural.

**Sound lacks bass.**

- Check that the speaker's + and - jacks are connected correctly.

**DVD/VIDEO CD/CD/Super Audio CD/MP3/JPEG player****The disc tray does not open and "LOCKED" appears.**

- Contact your Sony dealer or local authorized Sony service facility.

**The disc tray does not close.**

- Place the disc correctly.
- Always close the tray by pressing ▲ on the unit. Trying to press the tray closed with your fingers may cause problems with the player.

**The disc does not eject.**

- Consult your nearest Sony dealer.

**Play does not start.**

- Open the disc tray and check whether a disc is loaded.
- Wipe the disc clean (page 65).
- Replace the disc.
- Place the disc that this system can play (page 5).
- Place the disc correctly.
- Place the disc in the tray with the label side up.
- Remove the disc and wipe away the moisture on the disc, then leave the system turned on for a few hours until the moisture evaporates.
- Press ▷ to start play.
- The region code on the DVD does not match the system.
- Cancel the Custom Parental Control function (page 38).

**The sound skips.**

- Wipe the disc clean (page 65).
- Replace the disc.
- Try moving the system to a place without vibration (e.g., on top of a stable stand).
- Try moving the speakers away from the system, or placing them on separate stands. When you listen to a track with bass sounds at high volume, the speaker vibration may cause the sound to skip.

**Play does not start from the first track.**

- Shuffle Play (page 17), Repeat Play (page 18) or Program Play (page 16) has been selected.
- Resume Play has been selected. Press ■ in stop mode, then start playback (page 15).
- The title, DVD or PBC menu automatically appears on the TV screen.

**Playback starts automatically.**

- The DVD features an auto playback function.

**Playback stops automatically.**

- Some discs may contain an auto pause signal. While playing such a disc, the playback stops at the auto pause signal.

**You cannot perform some functions such as Stop, Search, Slow-motion Play, Repeat Play, Shuffle Play or Program Play.**

- Depending on the disc, you may not be able to do some of the operations above. Refer to the operating instructions supplied with the disc.

**Karaoke mode cannot be set to on.**

- When the headphones are connected to the system, you cannot set the karaoke mode. Disconnect the headphones.

***continued***

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**MP3 audio track cannot be played back.**

- The DATA CD is not recorded in MP3 format that conforms to ISO9660 Level 1/Level 2 or Joliet.
  - The MP3 audio track does not have the extension “.MP3”.
  - The data is not stored in MP3 format.
  - Discs containing files other than MPEG1 Audio Layer-3 files cannot be played.
  - The system cannot play audio tracks in MP3PRO format.
  - The “MODE (MP3, JPEG)” has been set to “IMAGE (JPEG)” (page 25).
  - Playback is possible up to 8 levels.
  - The disc contains more than 200 albums (the maximum number of MP3 audio tracks that can be contained on an album is 300).
- 

**MP3 audio tracks take longer to play back than others.**

- After the system reads all tracks on the discs, playback may take more time than usual if:
    - the number of albums or tracks on the disc is very large.
    - the album and track organization structure is very complex.
- 

**The JPEG image file cannot be played.**

- The DATA CD is not recorded in JPEG format that conforms to ISO9660 Level 1/Level 2 or Joliet.
  - The JPEG image file does not have the extension “.JPG” or “.JPEG”.
  - The data is not formatted in JPEG even though it has the extension “.JPG” or “.JPEG”.
  - It is larger than 3,072 (width) × 2,048 (height) in normal mode, or more than 3,300,000 pixels in Progressive JPEG.
  - It does not fit the screen (those images are reduced).
  - “MODE (MP3, JPEG)” has been set to “AUDIO (MP3)” (page 25).
  - Playback is possible up to 8 levels.
  - JPEG image files with a high width to length ratio cannot be played.
  - The disc contains more than 200 albums (the maximum number of JPEG image files that can be contained on an album is 300).
- 

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**The MP3 audio tracks and JPEG image file start playing simultaneously.**

- “AUTO” is selected in “MODE (MP3, JPEG)”.
- 

**“Data error” appears on the TV screen when playing a DATA CD.**

- The MP3 audio track/JPEG image file you want to play is broken.
  - The data is not MPEG1 Audio Layer 3 data.
  - The JPEG image file format does not conform to DCF.
  - The JPEG image file has the extension “.JPG” or “.JPEG”, but is not in JPEG format.
- 

**The disc title, album title and track title are not displayed correctly.**

- Use a disc that conforms with ISO9660 Level 1/Level 2, or Joliet in the expansion format.
  - The character codes that can be displayed by this system are numbers and alphabet only. Other characters appear as “\*”.
  - ID3 tag information cannot be displayed on this system.
- 

**The sound loses stereo effect when you play a DVD, VIDEO CD, CD, Super Audio CD or MP3.**

- Press KARAOKE PON to cancel Karaoke Pon mode (page 47).
  - Make sure the system is connected appropriately.
- 

**The recording was not done properly when making a digital recording from the CD/DVD player of this system to an optional component connected to the DVD DIGITAL OUT jack.**

- The DVD DIGITAL OUT jack of this system is not to be used for recording. Make an analog recording on an optional component connected to the VIDEO/SAT OUT L/R jacks.
-

## Picture

### There is no picture.

- Press FUNCTION + or – repeatedly (or DVD on the unit) to switch the function to DVD.
- Check that the system is connected securely.
- The video cable is damaged. Replace it with a new one.
- Make sure you connect the system to the video input jack of your TV (page 9).
- Make sure you turn on the TV and operate the TV correctly.
- Make sure you select the video input on the TV so that you can view the pictures from the system.
- When you play a VIDEO CD, make sure you set the color system correctly, according to your TV (color) system (Asian and Middle Eastern models only).
- Make sure you connect the system and your TV using only the supplied video cable so that you can view the pictures.
- You have set progressive format but your TV cannot accept the signal in progressive format. In this case, return the setting to interlace format (default setting) (page 35).
- Even if your TV is compatible with progressive format (525p/625p) signals, the image may be affected when you set progressive format. In this case, return the setting to interlace format (default setting) (page 35).

### Picture noise appears.

- Clean the disc.
- If video from this system has to go through your VCR to get to your TV, the copy-protection applied to some DVD programs could affect picture quality. If you still experience problems after checking your connections, please try connecting this system directly to your TV's S video-input, if your TV is equipped with this input (page 56).
- When you play a VIDEO CD, the color system is different. Set the color system to match your TV (page 34) (Asian and Middle Eastern models only).

---

### The aspect ratio of the screen cannot be changed even though you set "TV TYPE" in "SCREEN SETUP" in the Setup Display when you play a wide picture.

- The aspect ratio is fixed on your DVD.
- If you connect the system with the S video cable, connect directly to the TV. Otherwise, you may not change the aspect ratio.
- Depending on the TV, you may not change the aspect ratio.

---

### Messages do not appear on the screen in the language you want.

- Select the language you want for the on-screen display in "OSD" under "LANGUAGE SETUP" in the Setup Display (page 33).

---

### The language for the sound track cannot be changed.

- Multilingual tracks are not recorded on the DVD being played.
- The DVD prohibits changing the language for the sound track.

---

### The subtitle language cannot be changed.

- Multilingual subtitles are not recorded on the DVD being played.
- The DVD prohibits changing the subtitles.

---

### The subtitle cannot be turned off.

- The DVD prohibits turning off subtitles.

---

### The angles cannot be changed.

- Multi-angles are not recorded on the DVD being played.
- The DVD prohibits changing the angles.

## Tuner

**Severe hum or noise/stations cannot be received. (“TUNED” or “STEREO” flashes in the display)**

- Set the proper band and frequency (page 42).
- Connect the antenna properly (page 9).
- Find a place and an orientation that provide good reception, then set up the antenna again. If you cannot obtain good reception, we recommend you connect a commercially available external antenna.
- The supplied FM lead antenna receives signals along its entire length, so make sure you extend it fully.
- Locate the antennas as far away from the speaker cords as possible.
- Consult your nearest Sony dealer if the supplied AM antenna has come off the plastic stand.
- Try turning off surrounding electrical equipment.

**A stereo FM program cannot be received in stereo.**

- Press FM MODE repeatedly until “MONO” disappears.

## Optional components

**There is no sound.**

- Refer to General item “There is no sound.” (page 58) and check the condition of the system.
- Connect the component properly (page 55) while checking:
  - if the cords are connected properly.
  - if the cord plugs are firmly inserted all the way.
- Turn on the connected component.
- Refer to the operating instructions supplied with the connected component and start playing.

**If the system still does not operate properly after performing the above measures, reset the system as follows:**

Use buttons on the unit for the operation.

- 1 Disconnect the power cord.
- 2 Reconnect the power cord.
- 3 Press  $\text{I}/\text{O}$  to turn on the system.
- 4 Press  $\blacksquare$ , SOUND FIELD and  $\text{I}/\text{O}$  at the same time.

The system is reset to the factory settings except for DVD settings. You should set the settings you made, such as the preset stations, clock, and timer.

**To return the DVD setup to the default settings\*, perform reset as follows:**

- 1 Press  $\text{DISPLAY}$  in stop mode.
- 2 Press  $\uparrow$  or  $\downarrow$  repeatedly to select “SETUP”, then press ENTER.
- 3 Press  $\uparrow$  or  $\downarrow$  repeatedly to select “RESET”, then press ENTER.
- 4 Press  $\uparrow$  or  $\downarrow$  repeatedly to select “YES”, then press ENTER.  
It takes a few seconds to complete. Do not press  $\text{I}/\text{O}$  when resetting the system.

\* Except for Parental Control settings

## Messages

One of the following messages may appear or flash in the display during operation.

### DVD/VIDEO CD/CD/Super Audio CD/MP3/JPEG

#### Cannot Play

- A disc that cannot be played was inserted (page 6).
- A disc with an unsupported Region code was inserted.

#### Data Error

- The MP3 audio track/JPEG image file you want to play is broken.
- The data is not MPEG1 Audio Layer 3 data.
- The JPEG image file format does not conform to DCF.
- The JPEG image file has the extension “.JPG” or “.JPEG”, but is not in JPEG format.

#### No Disc

There is no disc in the unit.

#### Not in Use

You pressed an invalid button.

#### PASSWORD

Custom Parental Control is set.

#### Please Wait

The system is initializing itself.

#### Push STOP!

You pressed an invalid button.

#### Reading

The system is reading information of the disc. Some buttons are not available.

#### INVALID

You pressed DISC SKIP or an invalid button.

#### Tuner

#### Complete!

The preset operation ended normally.

## Timer

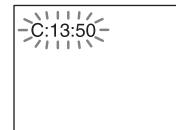
### OFF TIME NG!

The Play Timer start and end times are set to the same time.

## Self-diagnosis Function

*(When letters/numbers appear in the display)*

When the self-diagnosis function is activated to prevent the system from malfunctioning, a 5-character service number (e.g., C 13 50) with a combination of a letter and 4 digits appears on the screen and the front panel display. In this case, check the following table.



First 3 characters of the service number	Cause and/or corrective action
C 13	The disc is dirty. → Clean the disc with a soft cloth .
C 31	The disc is not inserted correctly. → Restart the system, then resert the disc correctly.
E XX (xx is a number)	To prevent a malfunction, the system has performed the self-diagnosis function. → Contact your nearest Sony dealer or local authorized Sony service facility and give the 5-character service number. Example: E 61 10

## Additional Information

# Precautions

### On operating voltage

Before operating the system, check that the operating voltage of your system is identical with the voltage of your local power supply.

### On safety

- The unit is not disconnected from the AC power source (mains) as long as it is connected to the wall outlet, even if the unit itself has been turned off.
- Unplug the system from the wall outlet (mains) if it is not to be used for an extended period of time. To disconnect the power cord (mains lead), pull it out by the plug. Never pull the cord itself.
- Should any solid object or liquid fall into the system, unplug the system and have it checked by qualified personnel before operating it any further.
- AC power cord must be changed only at the qualified service shop.

### On placement

- Do not place the system in an inclined position.
- Do not place the system in locations where it is;
  - Extremely hot or cold
  - Dusty or dirty
  - Very humid
  - Subject to vibrations
  - Subject to direct sunlight.
- Use caution when placing the unit or speakers on surfaces that have been specially treated (with wax, oil, polish, etc.) as staining or discoloration of the surface may result.

### On heat buildup

- Although the system heats up during operation, this is not a malfunction.
- Place the system in a location with adequate ventilation to prevent heat buildup in the system.
- If you continuously use this system at a high volume, the cabinet temperature of the top, side and bottom rises considerably. To avoid burning yourself, do not touch the cabinet.
- To prevent a malfunction, do not cover the ventilation hole for the cooling fan.

### In case color irregularity is observed on nearby a TV screen

With the magnetically shielded type of speaker system, the speakers can be installed near a TV set. However, color irregularity may still be observed on the TV screen depending on the type of your TV set.

### If color irregularity is observed...

Turn off the TV set, then turn it on after 15 to 30 minutes.

### If color irregularity is observed again...

Place the speakers farther away from the TV set.

### IMPORTANT NOTICE

Caution: This system is capable of holding a still video image or on-screen display image on your television screen indefinitely. If you leave the still video image or on-screen display image displayed on your TV for an extended period of time you risk permanent damage to your television screen. Projection televisions are especially susceptible to this.

### On operation

- If the system is brought directly from a cold to a warm location, or is placed in a very damp room, moisture may condense on the lens inside the CD/DVD player. Should this occur, the system will not operate properly. Remove the disc and leave the system turned on for about an hour until the moisture evaporates.
- When you move the system, take out any disc.

If you have any questions or problems concerning your system, please consult your nearest Sony dealer.

## Notes on discs

- Before playing, clean the disc with a cleaning cloth. Wipe the disc from the center out.
- Do not use solvents such as benzine, thinner, commercially available cleaners or anti-static spray intended for vinyl LPs.
- Do not expose the disc to direct sunlight or heat sources such as hot air ducts, nor leave it in a car parked in direct sunlight.
- Do not use discs encircled with a protection ring. This may cause a malfunction to the system.
- When using discs that have glue or similar tacky substance on the label side of the disc or that used a special ink when the label was printed, there is a chance that the disc or label may become attached to parts inside this unit. When this occurs, it may not be possible to remove the disc, and may also cause this unit to malfunction. Be sure to check that the label side of the disc is not sticky before using.

The following types of disc should not be used:

- Rental or used discs with attached seals where the glue extends beyond the seal. The perimeter of the seal on the disc is tacky.
- Discs that have labels printed using a special ink that feels tacky when touched.

## Cleaning the cabinet

Clean the cabinet, panel and controls with a soft cloth slightly moistened with mild detergent solution. Do not use any type of abrasive pad, scouring powder or solvent such as thinner, benzine or alcohol.

# Specifications

## Main unit

### Amplifier section

#### European and Russian models:

DIN power output (rated): 55 + 55 watts (4 ohms at 1 kHz, DIN)

Continuous RMS power output (reference):

75 + 75 watts (4 ohms at 1 kHz, 10% THD)

#### Other models:

The following measured at AC 120 V, 220 – 240 V, 50/60 Hz

DIN power output (rated) 55 + 55 watts  
(4 ohms at 1 kHz, DIN)

Continuous RMS power output (reference)

75 + 75 watts  
(4 ohms at 1 kHz, 10% THD)

#### Inputs

VIDEO/SAT IN (phono jacks):  
voltage 250/450 mV,  
impedance 47 kilohms

#### Outputs

VIDEO/SAT OUT (phono jacks):  
voltage 250 mV,  
impedance 1 kilohm

VIDEO OUT (phono jack):

max. output level  
1 Vp-p, unbalanced,  
Sync negative,  
load impedance  
75 ohms

S VIDEO OUT (4-pin/mini-DIN jack):

Y: 1 Vp-p, unbalanced,  
Sync negative,  
C: 0.286 Vp-p, load  
impedance 75 ohms

COMPONENT VIDEO OUT:

Y: 1 Vp-p, 75 ohms  
Pb, Pr: 0.7 Vp-p, 75 ohms

DVD DIGITAL OUT (Square optical connector jack,  
rear panel)

Wavelength: 660 nm

PHONES (stereo mini jack):

accepts headphones of  
8 ohms or more

SPEAKER: Use only the supplied  
speaker SS-WS2D

## **Disc player section**

System	Compact disc and digital audio and video system
Laser	Semiconductor laser (DVD: $\lambda=650$ nm, CD: $\lambda=790$ nm)
	Emission duration: continuous
Frequency response	DVD (PCM 48 kHz): 2 Hz – 22 kHz ( $\pm 1$ dB) CD: 2 Hz – 20 kHz ( $\pm 1$ dB)
Video color system format	European and Russian models: PAL Other models: NTSC, PAL

## **Tuner section**

FM stereo, FM/AM superheterodyne tuner	
<b>FM tuner section</b>	
Tuning range	87.5 – 108.0 MHz (50 kHz step)
Antenna	FM lead antenna
Antenna terminals	75 ohms unbalanced
Intermediate frequency	10.7 MHz
<b>AM tuner section</b>	
Tuning range	531 – 1,602 kHz (with the interval set at 9 kHz)
European and Russian models:	
Other models:	531 – 1,602 kHz (with the interval set at 9 kHz) 530 – 1,710 kHz (with the interval set at 10 kHz)
Antenna	AM loop antenna
Antenna terminals	External antenna terminal
Intermediate frequency	450 kHz

## **Speaker**

Speaker system	2-way, bass-reflex type, magnetically shielded type
Speaker units	
Woofer:	15 cm, cone type
Tweeter:	2.5 cm, balanced dome type
Nominal impedance	4 ohms
Dimensions (w/h/d)	Approx. 180 × 305 × 265 mm
Mass	Approx. 3.5 kg net per speaker

## **General**

Power requirements	
European and Russian models:	230 V AC, 50/60 Hz
Other models:	120 V or 220 – 240 V AC, 50/60 Hz
	Adjustable with voltage selector
Power consumption	50 watts 0.3 watts (in Power Saving mode)
Dimensions (w/h/d) (excl. speakers)	Approx. 254.5 × 136 × 346.5 mm

Mass Approx. 3.4 kg

Supplied accessories:	Remote Commander (1) R6 (size AA) batteries (2) AM loop antenna (1) FM lead antenna (1) Video cable (1) Speaker pads (8) Speaker cords (2)
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Design and specifications are subject to change without notice.

# Language code list

For details, see page 33.

The language spellings conform to the ISO639: 1988 (E/F) standard.

Code	Language	Code	Language	Code	Language
1027	Afar	1245	Inupiak	1489	Russian
1028	Abkhazian	1248	Indonesian	1491	Kinyarwanda
1032	Afrikaans	1253	Icelandic	1495	Sanskrit
1039	Amharic	1254	Italian	1498	Sindhi
1044	Arabic	1257	Hebrew	1501	Sangho
1045	Assamese	1261	Japanese	1502	Serbo-Croatian
1051	Aymara	1269	Yiddish	1503	Singhalese
1052	Azerbaijani	1283	Javanese	1505	Slovak
1053	Bashkir	1287	Georgian	1506	Slovenian
1057	Byelorussian	1297	Kazakh	1507	Samoan
1059	Bulgarian	1298	Greenlandic	1508	Shona
1060	Bihari	1299	Cambodian	1509	Somali
1061	Bislama	1300	Kannada	1511	Albanian
1066	Bengali; Bangla	1301	Korean	1512	Serbian
1067	Tibetan	1305	Kashmiri	1513	Siswati
1070	Breton	1307	Kurdish	1514	Sesotho
1079	Catalan	1311	Kirghiz	1515	Sundanese
1093	Corsican	1313	Latin	1516	Swedish
1097	Czech	1326	Lingala	1517	Swahili
1103	Welsh	1327	Laothian	1521	Tamil
1105	Danish	1332	Lithuanian	1525	Telugu
1109	German	1334	Latvian; Lettish	1527	Tajik
1130	Bhutani	1345	Malagasy	1528	Thai
1142	Greek	1347	Maori	1529	Tigrinya
1144	English	1349	Macedonian	1531	Turkmen
1145	Esperanto	1350	Malayalam	1532	Tagalog
1149	Spanish	1352	Mongolian	1534	Setswana
1150	Estonian	1353	Moldavian	1535	Tonga
1151	Basque	1356	Marathi	1538	Turkish
1157	Persian	1357	Malay	1539	Tsonga
1165	Finnish	1358	Maltese	1540	Tatar
1166	Fiji	1363	Burmese	1543	Twi
1171	Faroese	1365	Nauru	1557	Ukrainian
1174	French	1369	Nepali	1564	Urdu
1181	Frisian	1376	Dutch	1572	Uzbek
1183	Irish	1379	Norwegian	1581	Vietnamese
1186	Scots Gaelic	1393	Occitan	1587	Volapük
1194	Galician	1403	(Afan) Oromo	1613	Wolof
1196	Guarani	1408	Oriya	1632	Xhosa
1203	Gujarati	1417	Punjabi	1665	Yoruba
1209	Hausa	1428	Polish	1684	Chinese
1217	Hindi	1435	Pashto; Pushto	1697	Zulu
1226	Croatian	1436	Portuguese	1703	Not specified
1229	Hungarian	1463	Quechua		
1233	Armenian	1481	Rhaeto-Romanche		
1235	Interlingua	1482	Kirundi		
1239	Interlingue	1483	Romanian		

## List of items that can be displayed and selected by disc type

When you press  DISPLAY, the following control menu items are displayed.

Control Menu items	Function
	<b>TITLE</b> (DVD VIDEO or DVD-RW only) Selects the title (DVD) or the track (VIDEO CD) to be played. <b>SCENE</b> (VIDEO CD in PBC playback only) Displays the scene (VIDEO CD in PBC playback). <b>TRACK</b> (VIDEO CD only)
	<b>CHAPTER</b> (DVD VIDEO or DVD-RW only) Selects the chapter (DVD) or the index (VIDEO CD) to be played. <b>INDEX</b> (VIDEO CD only)
	<b>INDEX</b> (Super Audio CD only) Selects the index to be played.
	<b>TRACK</b> (CD, Super Audio CD or MP3 only) Selects the track to be played.
	<b>ORIGINAL/PLAY LIST</b> (DVD-RW only) Selects the type of titles (DVD-RW) to be played, the "ORIGINAL" one, or an edited "PLAY LIST".
	<b>TIME/TEXT</b> Checks the elapsed time and the remaining playback time. Input the time code for picture and music searching. Displays the DVD/CD/Super Audio CD text or the MP3 track name.
	<b>PROGRAM</b> (VIDEO CD, CD or Super Audio CD only) Selects the track to play in the order you want.
	<b>SHUFFLE</b> (VIDEO CD, CD or Super Audio CD only) Plays the track in random order.
	<b>REPEAT</b> Plays the whole disc or selected album repeatedly or plays a single title/chapter/track/album repeatedly. Also plays contents of program repeatedly.
	<b>A/V SYNC</b> (DVD VIDEO, DVD-RW or VIDEO CD only) Adjusts the delay between the picture and sound.
	<b>PARENTAL CONTROL</b> (DVD VIDEO, VIDEO CD, CD or Super Audio CD only) Sets to prohibit playback on this system.
	<b>SETUP</b> "QUICK" Setup Use Quick Setup to choose the desired language of the on-screen display, the aspect ratio of the TV. "CUSTOM" Setup In addition to the Quick Setup setting, you can adjust various other settings. "RESET" Returns the settings in "SETUP" to the default setting.
	<b>ALBUM</b> (DATA CD only) Selects the album (MP3 or JPEG) to be played.
	<b>FILE</b> (JPEG only) Selects the JPEG image file to be played.

Control Menu items	Function
	<b>DATE</b> (JPEG only) Displays the date the picture was taken by a digital camera.
	<b>INTERVAL</b> (JPEG only) Specifies the duration for which the slides are displayed on the screen.
	<b>EFFECT</b> (JPEG only) Selects the effects to be used for changing slides during a slide show.
	<b>MODE (MP3, JPEG)</b> (DATA CD only) Selects the data type; MP3 audio track (“AUDIO”), JPEG image file (“IMAGE”) or both (“AUTO”) to be played when playing a DATA CD.
	<b>KEY CONTROL</b> (except for Super Audio CD and JPEG) Changes the key to suit your vocal range.
	<b>KARAOKE PON</b> (except for Super Audio CD and JPEG) Enjoys karaoke with a stereo-recorded disc, even if it is a non-karaoke disc, by reducing the sound of the vocals.

#### Note

All the Control Menu items cannot be displayed by pressing  DISPLAY once. In this case, press the button twice or more until the desired item appears.

#### Tips

- The Control Menu items differ depending on the disc.
- The following indicators light up in green when you select any item except “OFF”: “PROGRAM”/“SHUFFLE”/“REPEAT”/“A/V SYNC”/“KARAOKE PON”
- The “ORIGINAL/PLAY LIST” indicator lights up in green only when you select “PLAY LIST” (default setting).

## System setup item list

The default settings are underlined.

### LANGUAGE SETUP (page 33)

OSD	Select the language you want to use from the displayed language list.
MENU	Select the language you want to use from the displayed language list.
AUDIO	Select the language you want to use from the displayed language list.
SUBTITLE	Select the language you want to use from the displayed language list.

### SCREEN SETUP (page 33)

TV TYPE <sup>1)</sup>	<u>16:9</u> 4:3 LETTER BOX 4:3 PAN SCAN
COLOR SYSTEM <sup>2)</sup>	<u>AUTO</u> PAL NTSC
SCREEN SAVER	<u>ON</u> OFF
BACKGROUND	<u>JACKET PICTURE</u> GRAPHICS BLUE BLACK
4:3 OUTPUT	<u>FULL</u> NORMAL

### CUSTOM SETUP (page 36)

PAUSE MODE	<u>AUTO</u> FRAME
TRACK SELECTION	<u>OFF</u> AUTO
MULTI-DISC RESUME	<u>ON</u> OFF
AUDIO DRC	<u>OFF</u> STANDARD MAX

<sup>1)</sup> The default settings vary, depending on the country model.

<sup>2)</sup> Asian and Middle Eastern models only

## Glossary

### Album

Section of a music piece on a data CD containing MP3 audio tracks or JPEG image files.

### Auto Pause

An automatical pause according to the signal encoded on the disc while playing a VIDEO CD. If the CD/DVD player does not resume play for a long time, press ▶ to resume play manually.

### Chapter

Sections of a picture or a music piece on a DVD that are smaller than titles. A title is composed of several chapters. Each chapter is assigned a chapter number enabling you to locate the chapter you want.

### Dolby Digital

This movie theater sound format for movie theaters is more advanced than Dolby Surround Pro Logic. In this format, the surround speakers output stereo sound with an expanded frequency range and a sub woofer channel for deep bass is independently provided. This format is also called “5.1” because the sub woofer channel is counted as 0.1 channel (since it functions only when a deep bass effect is needed). All six channels in this format are recorded separately to realize superior channel separation.

Furthermore, since all the signals are processed digitally, less signal degradation occurs.

### DTS

Digital audio compression technology that the Digital Theater Systems, Inc. developed. This technology conforms to 5.1-channel surround. The surround channel is stereo and there is discrete sub woofer channel in this format. DTS provides the same 5.1 discrete channels of high quality digital audio. The good channel separation is realized because the all channel data is recorded discrete and processed in digital.

## DVD

A disc that contains up to 8 hours of moving pictures even though its diameter is the same as a CD.

The data capacity of a single-layer and single-sided DVD, at 4.7 GB (Giga Byte), is 7 times that of a CD. Furthermore, the data capacity of a dual-layer and single-sided DVD is 8.5 GB, a single-layer and double-sided DVD 9.4 GB, and a dual-layer and double-sided DVD 17 GB.

The picture data uses the MPEG 2 format, one of the worldwide standards of digital compression technology. The picture data is compressed to about 1/40 of its original size. The DVD also uses the variable rate coding technology that changes the data to be allocated according to the status of the picture.

The audio data is recorded in Dolby Digital as well as in PCM, allowing you to enjoy more realistic audio presence.

Furthermore, various advanced functions such as the multi-angle, multilingual, and Parental Control functions are provided with the DVD.

## DVD-RW

A DVD-RW is a recordable and rewritable disc that is the same size as a DVD VIDEO. The DVD-RW has two different modes: VR mode and Video mode. DVD-RWs created in Video mode have the same format as a DVD VIDEO, while discs created in VR (Video Recording) mode allow the contents to be programmed or edited.

## DVD+RW

A DVD+RW (plus RW) is a recordable and rewritable disc. DVD+RWs use a recording format that is comparable to the DVD VIDEO format.

## File

A JPEG image recorded on a DATA CD. A single file consists of a single image.

## Film based software, Video based software

DVDs can be classified as Film based or Video based software. Film based DVDs contain the same images (24 frames per second) that are shown at movie theaters. Video based DVDs, such as television dramas or sit-coms, displays images at 30 frames (or 60 fields) per second.

## **Index (CD, Super Audio CD) / Video Index (VIDEO CD)**

A number that divides a track into sections to easily locate the point you want on a VIDEO CD, CD or Super Audio CD. Depending on the disc, no indexes may be recorded.

## **Interlace format (Interlaced scanning)**

The Interlace format is the NTSC standard method for displaying TV images at 30 frames per second. Each frame is scanned twice - alternately between the even numbered scanning lines and then odd numbered scanning lines, at 60 times per second.

## **Menu Playback**

Playback using the menu screens recorded on VIDEO CDs with PBC functions. You can enjoy simple interactive software using the menu playback function.

## **Multi-angle function**

Various angles, or viewpoints of the video camera, for a scene are recorded on some DVDs.

## **Multilingual function**

Several languages for the sound or subtitles in a picture are recorded on some DVDs.

## **Multi Session**

This is a recording method that enables adding of data using the Track-At-Once method. Conventional CDs begin at a CD control area called the Lead-in and end at an area called Lead-out. A Multi Session CD is a CD having multiple sessions, with each segment from Lead-in to Lead-out regarded as a single session. CD-Extra: This format records audio (audio CD data) on the tracks in session 1 and data on the tracks in session 2.

## **Parental Control**

A function of the DVD to limit playback of the disc by the age of the users according to the limitation level in each country/region. The limitation varies from disc to disc; when it is activated, playback is completely prohibited, violent scenes are skipped or replaced with other scenes and so on.

## **Playback Control (PBC)**

Signals encoded on VIDEO CDs (Version 2.0) to control playback. By using menu screens recorded on VIDEO CDs with PBC functions, you can enjoy playing simple interactive programs, programs with search functions, and so on.

This system conforms to Ver. 1.1 and Ver. 2.0 of VIDEO CD standards. You can enjoy two kinds of playback depending on the disc type.

### **VIDEO CDs without PBC functions**

#### **(Ver. 1.1 discs)**

Enjoy video playback (moving pictures) as well as music.

### **VIDEO CDs with PBC functions**

#### **(Ver. 2.0 discs)**

Play interactive software using menu screens displayed on the TV screen (PBC Playback), in addition to the video playback functions of Ver. 1.1 discs. Moreover, you can play high-resolution still pictures, if they are included on the disc.

## **Progressive format (sequential scanning)**

In contrast to the Interlace format, the progressive format can reproduce 50 to 60 frames per second by reproducing all scanning lines (525 lines for the NTSC system, 625 lines for the PAL system). The overall picture quality increases and still images, text, and horizontal lines appear sharper. This format is compatible with the 525 or 625 progressive format.

## **Region Code**

This system is used to protect copyrights. A region number is allocated on each DVD system or DVD disc according to the sales region. Each region code is shown on the system as well as on the disc packaging. The system can play the discs that match its region code. The system can also play discs with the  mark. Even when the region code is not shown on the DVD, the region limit may still be activated.

## **Scene**

On a VIDEO CD with PBC functions (page 20), the menu screens, moving pictures, and still pictures are divided into sections called "scenes". Each scene is assigned a scene number enabling you to locate the scene you want.

## **Super Audio CD**

Super Audio CD is a new high quality audio disc standard that records using the DSD (Direct Stream Digital) format instead of the PCM format used for current CDs, etc. The DSD format has a sampling frequency 64 times that of current CDs, and uses 1-bit quantization to ensure a sufficient dynamic range and more faithfully reproduce the original sound over a vastly wider playback range and audible range than current CDs.

There are various types of Super Audio CD as follows.

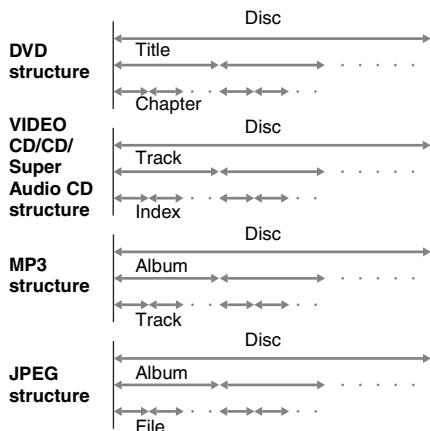
- Super Audio CD (single layer disc)  
Discs with only a single HD (high density) layer (high density signal layer for Super Audio CD)
- Super Audio CD (dual layer disc)  
Discs with two HD layers that allow long-time playback. These discs have a two-layer structure but only one side is read, so there is no need to turn over the disc.
- Super Audio CD+CD (hybrid disc)  
Two-layer discs with a HD layer and a CD layer. These discs have a two-layer structure but only one side is read, so there is no need to turn over the disc. In addition, the CD layer contents can be played even by a normal CD player.
- Two-channel + multi-channel Super Audio CD discs  
Super Audio CD discs with both a two-channel area and a multi-channel area recorded in the HD layer.

## **Title**

The longest sections of a picture or a music piece on a DVD; a movie, etc., for a picture piece on video software; or an album, etc., for a music piece on audio software. Each title is assigned a title number enabling you to locate the title you want.

## Track

Sections of a picture or a music piece on a CD, VIDEO CD, MP3 or JPEG. Each track is assigned a track number enabling you to locate the track you want.



## VIDEO CD

A compact disc that contains moving pictures. The picture data uses the MPEG 1 format, one of the worldwide standards for digital compression technology. The picture data is compressed to about 1/140 of its original size. Consequently, a 12 cm VIDEO CD can contain up to 74 minutes of moving pictures.

VIDEO CDs also contain compact audio data. Sounds outside the range of human hearing are compressed while the sounds we can hear are not compressed. VIDEO CDs can hold 6 times the audio information of conventional audio CDs.

There are 2 versions of VIDEO CDs.

- Version 1.1: You can play only moving pictures and sounds.
- Version 2.0: You can play high-resolution still pictures and enjoy PBC functions.

This system conforms to both versions.

# List of button locations and reference pages

## How to use this page

Use this page to find the location of buttons and other parts of the system that are mentioned in the text.

Illustration number

↓  
SA-CD/CD [11] (15)

↑  
Name of button/part Reference page

## Main unit

### ALPHABETICAL ORDER

#### A - R

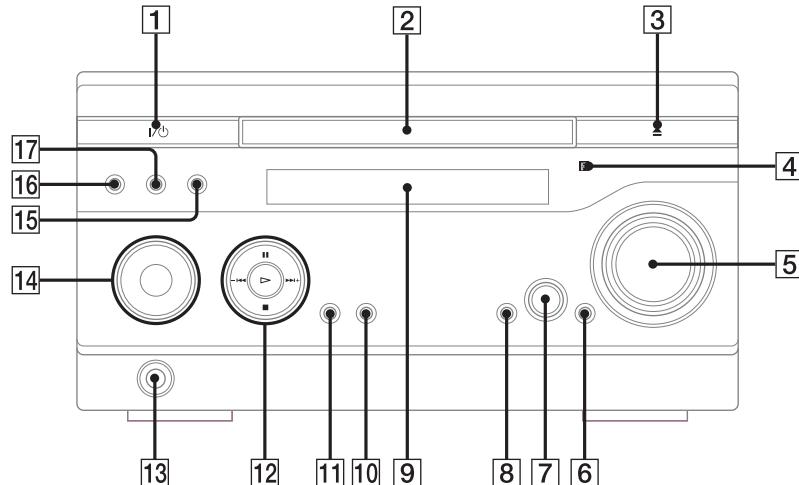
BASS/TREBLE [8] (45)  
DIMMER [17] (49)  
Disc tray [2] (13)  
DISPLAY [15] (49, 53)  
Display window [9]  
DSGX [6] (45)  
DVD [14] (10, 13, 35)  
Headphones jack [13]  
PRESET +/- [12] (43)  
PROGRESSIVE [10] (35)  
Remote sensor [4]

#### S - Z

SA-CD/CD [11] (15)  
SOUND FIELD [7] (45, 62)  
TUNER AM [14] (42, 43)  
TUNER FM [14] (42, 43)  
TIME/TEXT [16] (44, 50, 51)  
VIDEO/SAT [14] (56)  
VOLUME control [5]

### BUTTON DESCRIPTIONS

I/∅ (power) [1] (9, 43, 62)  
▲ (open/close) [3] (13)  
▷ (play) [12] (13, 40)  
■ (pause) [12] (10, 14)  
■ (stop) [12] (14, 37, 62)  
◀/▶ (go back/go forward)  
[12] (12, 14, 45)



## Remote control

### ALPHABETICAL ORDER

#### A - Q

- ALBUM +/- [24] (14)  
 ANGLE [5] (41)  
 AUDIO [4] (30, 46)  
 CLEAR [32] (16, 17, 19, 24, 27)  
 DISC SKIP<sup>1)</sup> [20]  
 DISPLAY [17] (49, 53)  
 ENTER [12] (11, 12, 16, 17, 18, 19,  
     20, 23, 25, 27, 28, 31, 32, 37,  
     42, 43, 48)  
 FM MODE [22] (44)  
 FUNCTION +/- [2] (13, 35, 42,  
     43)  
 KARAOKE MODE [15] (46)  
 KARAOKE PON [16] (47)  
 MENU [6] (19, 23, 25)  
 Number buttons<sup>2)</sup> [14] (19, 20, 27,  
     33, 37, 43, 54)  
 PICTURE NAVI [3] (24, 28)  
 PRESET + [26] (43)  
 PRESET - [30] (43)

#### R - Z

- REPEAT [22] (18)  
 SLEEP [18] (48)  
 SOUND FIELD [21] (45)  
 SUBTITLE [23] (41)  
 THEATRE SYNC [19] (54)  
 TIMER MENU [35] (11, 48)  
 TIME/TEXT [34] (44, 50, 51)  
 TOP MENU [13] (19)  
 TUNING + [9] (42, 44)  
 TUNING - [11] (42, 44)  
 TV [28] (54)  
 TV CH + [26] (54)  
 TV CH - [30] (54)  
 TV/VIDEO [18] (54)  
 TV VOL +/-<sup>2)</sup> [7] (54)  
 VOLUME +/-<sup>2)</sup> [7] (48)

### BUTTON DESCRIPTIONS

- [/]/(power) [1] (9, 48)  
 TV [/]/(power) [1] (54)  
 ←• REPLAY/ADVANCE •→ [8] (14)  
 ◀■ STEP/STEP ■▶ [8] (14)  
 SLOW ▶ [9] (14)  
 ▶ (fast forward) [9] (14)  
 ■ (pause) [10] (14)  
 ▲ SLOW [11] (14)  
 ▲◀ (rewind) [11] (14)  
 ↑/↓/◀/▶ [12] (11, 17, 31, 48)  
 ☰ DISPLAY [25] (12, 17, 31, 46,  
     53)  
 ▶■ (go forward) [26] (14, 45)  
 ■ (stop) [27] (14, 37)  
 ▷ (play)<sup>2)</sup> [29] (13, 40)  
 ▲◀ (go back) [30] (12, 14, 45)  
 ⌂ RETURN [31] (20)  
 -/- [32]  
 KEY CONTROL #/b [33] (47)

<sup>1)</sup>The DISC SKIP button is not available for this model.

<sup>2)</sup>The ▷, number 5 and VOLUME + (TV VOL +) buttons have tactile dots. Use the tactile dots as references when operating the system.

